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Inside Dope

By George F. Taubeneck

As Others See Us

Talking on the Radio
Sears Roebuck: Move Over
Amateurish Competition
Minor Difference

As Others See Us

Last week we mentioned "Tex" Faught's new book, "The Care and Feeding of Executives." Closer examination of this irreverent volume discloses that "Tex" took a crack at the column you are now reading.

At the back of the book is a set of "daffynitions," such as . . .

In Conference: "He's gone out."
Can't Be Disturbed: "Nobody knows where."

And, here it is . . .

Inside Dope: "Anything a dope on the outside will believe."

Inasmuch as we knew "Tex" fairly well when he was a Kelvinator publicity man, and since the title of this column was copyrighted some 18 years ago when we first started using it in the Champaign (Ill.) Daily Illini, we give you three guesses as to whose balloon "Tex" wanted to deflate.

Talking on the Radio

One of the book's best sections has to do with "The Private Side of Public Relations"—as might be imagined, considering Faught's background. Take this excerpt:

"The medium of radio gives the up-and-coming Executive a new means of being interviewed:

"The number one thing to remember (about radio) is—don't yell at the microphone.

"Just sort of talk to it half confidential like. The guy in the control room, the transmitter, the AT&T and the Federal Communications Commission will do the rest. In fact—

"The mike is so careful to see that everything you say gets heard that every time you say 'Well, uh,' it says 'Well, uh' right out into the big wide world. So, if you say 'Well, uh,' more than anything else, some listener will tune in on Uncle Don instead.

"This problem can often be overcome by using a script. But here the thing to remember is that—nothing rattles like a scared script."

Sears Roebuck: Move Over

"Inside Dope" took another beating—although surely unintentional—this week, too.

A subscriber wrote in that he enjoyed something that had been printed therein, and would we please send him an extra copy "for his personal files."

Looks like we're hit the big time usefulness at last . . . right up there with the Sears, Roebuck and Montgomery Ward catalogs.

Amateurish Competition

Down in Kendallville, Ind., is the oldest refrigerator manufacturer in the world, the McCray Refrigerator Co.

And some of its executives, like John Hart and R. J. Rehwinkel, have been around a long, long time. They've seen many upstarts come and go, while they rolled along "forever," always gaining strength and solidifying their position.

So when R. J. Rehwinkel writes an editorial for their house organ, The McCray News, you can be sure it's loaded with sage wisdom. In the February issue of that publication, for example, Mr. Rehwinkel writes an editorial entitled:

(Concluded on Page 8, Column 1)

Strikes Hold Up Peak Volume Production 2 or 3 Months

DETROIT—Despite the settlement in the steel industry, strikes continue to plague the refrigeration and air conditioning and the major appliance industries. In some quarters it was predicted that the shortages caused by the strikes might prevent a full flow of refrigeration and appliance items until the second half of the year.

The following is the news of strikes—or made by strikes—as it affects these fields:

G-E, Westinghouse Offers Under Consideration

WASHINGTON, D. C.—Strike of electrical workers in General Electric and Westinghouse plants was well into its second month. G-E's Charles E. Wilson talked with Economic Stabilization Director Chester Bowles on Feb. 19 "to get a clarification of the new wage-price policy."

It was reported that G-E had indicated a willingness to grant a wage increase of about 16% to all of its workers. However, this would result in a wide differential in terms of the actual monetary value of the increase through the various grades of workers, and the union was said to be holding out for an increase similar to the one granted by the electrical division of General Motors which provided a blanket increase of 18½ cents an hour.

The issue was further complicated by the contention of Westinghouse that its average wage before the strike was higher than its competitors, and that it shouldn't be tapped for as great an increase. Gwilym A. Price, new president of the firm, reported on Feb. 19 that specific proposals that "provide a basis of settlement" had been made to the workers.

Steel Supply In Volume May Be Month Away

PITTSBURGH—The steel strike is over, but it may be a month before users of steel begin to get it in any volume.

Some producers said flatly that it might be at least four weeks before all facilities would be properly geared for a pre-strike production rate.

However, one helpful move was announced by the OPA on Feb. 20 when it authorized the steel mills to sell carbon and alloy steel products on an adjustable pricing basis. This means that steel buyers can buy now and pay the difference between present and new ceilings at a later date.

Some steel fabricators protested bitterly that settlement of the strikes in the mills helped them not at all, and that they would have to be given price relief or close their doors.

Some others were ready to resume immediate production, however. Bundy Tubing Co. of Detroit, a major supplier of steel tubing to the refrigeration and appliance fields, hoped to approach full production again by March 1.

Strikes Force Carrier Corp. To Operate 'In the Red'

SYRACUSE, N. Y.—The combination of price ceilings and strikes has forced Carrier Corp. operations "into the red," declared Cloud Wampler, president, at a meeting of 2,500 company employees in which he announced the release of 138 salaried workers.

"Since V-J Day shortages of materials and parts have made it increasingly difficult for Carrier to finish goods and to make deliveries. As a result the company is now operating in the red," Mr. Wampler declared.

Carrier now has a backlog of entered orders totaling \$17,845,000, and another \$10,000,000 in orders which have not yet been entered, he said, explaining that salaried personnel was being reduced "to insure the

soundness of our company."

Mr. Wampler told those being released that "what has happened is no fault of yours or ours. We are simply the victims of a situation that could have been and should have been avoided."

Material Shortages Halt Kelvinator Final Assembly

DETROIT—Shortages of materials caused by the strikes has stopped final assembly of products at the Kelvinator Division of Nash-Kelvinator Corp.

The plant is still in operation producing whatever parts and sub-assemblies that may be possible with the materials on hand.

Frigidaire Back to Work, Material Inventories Low

DAYTON, Ohio—Following settlement of the strike of electrical workers, Frigidaire Division of General Motors Corp. went back to work last week, but how long production could continue was a matter of conjecture.

Inventories were reportedly very low, and the company sent out tracers to locate freight cars containing parts and steel which had been diverted to yards in surrounding towns during the Frigidaire strike.

Admiral's Production Delayed Two Months

CHICAGO—With its production delayed an estimated two months by the steel strike, Admiral Corp. sales this year will probably run at least 10% below previous estimates, declared company officials last week.

Sizable amounts of the company's refrigerators, ranges, and radios will not reach the market until late next fall, Admiral officials believe.

When the steel strike came, production lines just then going into operation were turning out 200 to 300 refrigerators daily. The rate was cut to 75 a day to conserve steel and will probably go even lower until steel inventories are replaced, the company indicated.

Range production had been scheduled to begin in April, but officials now say they cannot predict when assembly in volume will be possible.

Electrical Parts Shortage Brings Lay Off at Hotpoint

CHICAGO—Because of the steel and electrical strikes, nearly 2,000 employees were laid off by Edison General Electric Appliance Co. (Hotpoint) here. Six weeks' to two months' production was lost, the company believes.

Principal shortage was electric switches, which hit Hotpoint's electric range and commercial cooking equipment assembly lines.

Fear New Policy May 'Squeeze' Retailers

CHICAGO—As it now stands, the new government wage-price policy will increase the price squeeze on retailers unless a clarifying statement to the contrary is issued, fears Joseph T. Meek, executive secretary of the Illinois Federation of Retail Associations.

Although industry is promised prices high enough to assure "an average rate of profit equal as nearly as may be to the rate of return . . . in the peacetime base period," the stabilization order does not grant any such provision on retail pricing, asserted Mr. Meek.

"We need a specific amendment, a directive to OPA, which says that when the manufacturer gets his price boost, retailers will also get price relief," Mr. Meek declared.

R.E.M.A.-R.E.W.A. Complete Plans For Conference Opening March 4

CHICAGO — Refrigeration Equipment Wholesalers Association will hold its eleventh annual convention at the Stevens hotel here March 4-7, with a program designed to permit its members to participate in "conference booth meetings" with individual members of the Refrigeration Equipment Manufacturers Association.

The R.E.W.A. membership will have meetings on Monday afternoon, March 4; Tuesday morning, March 5; and a joint meeting with R.E.M.A. on Wednesday morning, March 6. This leaves parts of Tuesday and Wednesday, and all of Thursday open for the sessions with individual manufacturers.

The social program calls for a joint luncheon with R.E.M.A. Tuesday noon, and the banquet—with a floor show and dancing—starting at 7 p.m. Wednesday night.

In their meetings the parts and supplies wholesalers will hear reports of standing and special committees, talks by some of their own members on problems of the trade, and talks by F. J. Hood, president of R.E.M.A., H. T. McDermott, executive secretary of the Refrigeration Service Engineers Society; and F. K. Zimmerman, (Concluded on Page 4, Column 4)

Facilities Expanded For Production of Par Condensing Units

DEFIANCE, Ohio—An expansion program to increase the production of "Par" commercial condensing units was announced last week by M. H. Pendergast, president of Lynch Mfg. Corp., producer of the Par machine.

Additional manufacturing space has been made available by the transfer of the Wrap-O-Matic Division of Lynch Mfg. Corp. from the Defiance plant to the Lynch Package Machinery Corp. in Toledo. New production facilities for the manufacture of condensing units are being added, and assembly lines are being completely remodeled, Mr. Pendergast declared.

It was also announced that the general offices of Lynch Mfg. Corp. will be located at 3600 Summit St., Toledo, in a new office building now nearing completion to house the offices of all of the Ohio subsidiaries of the corporation.

Food Supermarket Will Try Appliance Selling

PORTLAND, Me.—"Our Forest Ave. food supermarket should be an ideal store to merchandise electrical appliances, and I am going to prove it or be disappointed," declares Herbert K. Smaha of Columbia Markets here, in announcing his plan to set up an appliance section in the supermarket.

The appliance department is not to be a "serve-self" department like so much of the rest of the store, but will operate as a separate section "with personnel who understand this type of sales," Mr. Smaha says.

"We feel that because many of the electrical appliances on the market today are purchased for use in the kitchen, the ideal way to sell them is at the time when the customer's mind is on her kitchen," the supermarket operator pointed out.

"Women go to food stores more often than to any other type of retail outlet. Therefore, we feel our appliance displays will be exposed more often than its possible otherwise, and moreover, will be shown alongside the food products with which they will be used."

CHICAGO — Members of the Refrigeration Equipment Manufacturers Association, meeting at the Stevens hotel here March 4 through 7, will devote part of their time to meetings involving association affairs, and the remaining time will be given over to conferences with refrigeration equipment and supplies wholesalers who are in attendance at the meeting of the Refrigeration Equipment Wholesalers Association.

These conferences will be held in booths in the Stevens exhibition hall which have been assigned to individual manufacturers. There will be no displays of any kind during the meetings, either in the booths or in hotel rooms.

There will be several important meetings among the Rema membership during the course of the conference. On Monday morning, March 4, there will be an OPA Industry Advisory Committee Meeting for condensing unit manufacturers only.

Product section meetings will be Monday afternoon, and the Rema board of directors will meet at 7 p.m. Monday night.

Members of the association will hold their first session Tuesday morning. The conference booths will open Tuesday afternoon. Wednesday morning will be marked by a joint R.E.M.A.-R.E.W.A. meeting, with the (Concluded on Page 21, Column 1)

Refrigeration Corp. Has Ice Cream Cabinet Div.

NEW YORK CITY—John M. Bess, president of Refrigeration Corp. of America, has announced the appointment of Harvey H. Farber, vice president, as the directing head of a new department which will concentrate on the national sale of ice cream cabinets.

This is one of the immediate steps the company is taking to extend and expand its operations as a wholly owned subsidiary of Noma Electric Corp. of which Henri Sadacca is president.

Mr. Farber has been vice president of Refrigeration Corp. since its organization.

When interviewed a few days ago as to the plans of his new department, Mr. Farber said that the company will offer a complete line of ice cream cabinets in all sizes. (Concluded on Page 4, Column 1)

ACRMA Will Provide Simple Load Calculator

WASHINGTON, D. C.—Salesmen "measuring" a store, restaurant, or office for self-contained air conditioners made by Air Conditioning & Refrigeration Machinery Association members no longer need to make involved computations to arrive at the right answer.

The Cooling Load Estimate Form, recently copyrighted by the Air Conditioning & Refrigerating Machinery Association, lists all the factors to be considered in adequately air conditioning a space. It provides simple computations to indicate the number and capacity of the self-contained air conditioners needed.

ACRMA's Cooling Load Estimate Form is designed mainly as an aid in the sale of "store coolers" through the 5-ton size, but may be used in figuring jobs requiring larger self-contained air conditioners. General use of the form will minimize the number of under-capacity air conditioning installations, association officials believe.

ACRMA's Room Air Conditioner Section will soon publish a form of selection procedure especially adapted for room air conditioners.

Commercial Refrigeration, Inc. Buys Cleveland Firm, Will Handle York Corp. Lines In Four Counties



HENRY B. WALZ BASIL S. MILLER DEWEY H. DOLISON

CLEVELAND—Purchase here of Oil Heating Devices, Inc. by Commercial Refrigeration, Inc. is announced by Henry B. Walz, president and general manager.

Mr. Walz, who recently resigned as manager of Carlings, Inc., is also oldest director in point of service with the South Side Federal Savings & Loan Association.

Commercial Refrigeration Corp. will represent York Corp.'s line of commercial refrigeration and air conditioning equipment in Cuyahoga, Lorain, Geauga, and Lake counties. Cold Draft equipment would be handled over the same territory for the Uniflow Co. of Erie, Pa.

Aiding Mr. Walz will be Basil S. Miller as chief engineer and Dewey

H. Dolison as sales manager. Mr. Miller has had 20 years experience in layout, equipment recommendation, and installation design—much of this time with Nash-Kelvinator Corp.

Mr. Dolison, in the refrigeration business since 1924, has successively served as general sales manager of Temprite Products Co. of Detroit; commercial department manager as well as district manager for General Electric; Chicago district head for Airtemp division of Chrysler Corp.; and with distributors.

The new firm's principal business, Mr. Walz said, will consist of supplying, engineering, installing, financing, and servicing equipment for air conditioning and commercial and industrial applications.

Maxson Now Producing Frozen Food Single Items; French Fries First

NEW YORK CITY—The Maxson Food Systems, Inc., has entered the field of single frozen food items in packages.

Maxson's is the organization that for several months has been producing in its plant at Queens Village, N. Y., some 400,000 partially pre-cooked and quick-frozen meals for the Naval Air Transport Service and other military units.

The package now on the test market contains 10 ounces of frozen French fried potatoes and is sized for the home refrigerator's freezing compartment. The potatoes are wrapped in cellophane to prevent dehydration, with a heavy overwrapping of waxed paper and an outer box of cardboard.

The partially pre-cooked potatoes are purposely unsalted so that they may be salted in the home to individual taste.

Directions on the package call for 20 minutes of final cooking on the top shelf of the pre-heated home oven, the contents of the package being spread on a cooking pan and the oven pre-heated to 400° F.

New Plant For Food Firm

BEVERLY HILLS, Calif.—A new refrigeration plant is being erected at 9235 West Third St., Beverly Hills, Calif., for the Ocean Foods Corp. It will contain 9,400 sq. ft. of floor space and will cost \$30,000.

Freezer Prices

Coldaire Prices For Four Models

CHICAGO—Coldaire Corp. here received maximum net prices on four models of freezers and storage cabinets for sales to distributors, dealers, and consumers by OPA's Order 267, MPR 591.

Prices are as follows:

Model	On sales to—		
	Distributors	Dealers	Consumers
No. 3C 45— 3 cu. ft. 1/4 hp. condensing unit	\$130	\$156	\$260
No. 10C 45— 10 cu. ft. 1/4 hp. condensing unit	190	228	380
No. 12D 45— 12 cu. ft. 1/4 hp. condensing unit	280	336	560
No. 17C 45— 17 1/2 cu. ft. 1/4 hp. condensing unit	350	420	700

The above prices are subject to discounts and allowances, the rendition of services, plus crating and shipping charges, OPA said.

Prices on Stoner Co.

12.75 Cu. Ft. Models

AURORA, Ill.—Ceiling prices on two models of farm and home freezers manufactured by the Stoner Mfg. Corp. here were recently established by OPA in Order 273, MPR 591, as follows:

Model	On sales to—		
	Distributors	Dealers	Consumers
12.75 cu. ft. 1/4 hp. condensing unit	\$215	\$258	\$430
12.75 cu. ft. 1/4 hp. condensing unit with stainless steel liner	235	282	470

Murdoch, Inc. Vertical Model Sells for \$550

PHILADELPHIA—Manufactured by Murdoch, Inc., here, a vertical home freezer containing 14.5 cu. ft. and having a 1/4 hp. condensing unit will retail at \$550, according to Order 269, MPR 591, recently issued by OPA.

On sales to distributors and dealers the maximum prices are \$300 and \$350, respectively, it was further disclosed. These prices are subject to the same discounts, allowances, and crating expenses that apply to similar orders.

Combination Freezer, Refrigerator Unit

SEATTLE—Maximum retail price for the combination home freezer and refrigerator manufactured here by Pacific Electrical & Mechanical Co., Inc., and having a 1/4-hp. condensing unit, was set at \$460 recently by OPA.

On sales to distributors, the ceiling price for this box is \$230, and on sales to dealers the maximum is \$276. These prices were established by OPA Order 270, MPR 591.

Price for Freezer Made In Vancouver, Wash.

VANCOUVER, Wash.—Maximum prices on sales to jobbers and dealers and to consumers have been established by OPA for the F. H. Sullivan & Co.'s refrigeration freezer box under Order 263, MPR 591.

The Sullivan box, 20 cu. ft. with a 1/4 hp. condensing unit, is authorized to sell to jobbers and dealers for \$300 and to consumers for \$495, OPA said.

Prices listed above are subject to the usual discounts and crating charges.

Alabama Firm Offers 12 Cu. Ft. Model

DEMOPOLIS, Ala.—For the quick-freeze storage locker manufactured here by the H. P. Randall Mfg. Co. having a capacity of 12 cu. ft. and a 1/4-hp. condensing unit, OPA Order 271, MPR 591, sets the following prices: on sales to distributors, \$235; dealers, \$282; and consumers, \$470.

The usual stipulations of discounts, allowances, and crating charges apply to the above prices, OPA said.

Coin Machine Makers See Frozen Foods In Movie Lobby Vendors

CHICAGO—The housewife who attends a late matinee soon will be able to do her shopping for dinner right in the lobby of her favorite movie theater, according to forecasts of authorities in the coin vending machine industry.

Reports to the Refrigeration Equipment Manufacturers Association from coin machine producers disclose that new developments which may be expected before long include mechanically refrigerated machines for the vending of frozen fruits, vegetables and meats.

Other machines are being planned for the sale of delicatessen items such as cold meats, potato salad, prepared salads, cheese, bakery specialties, and other foods.

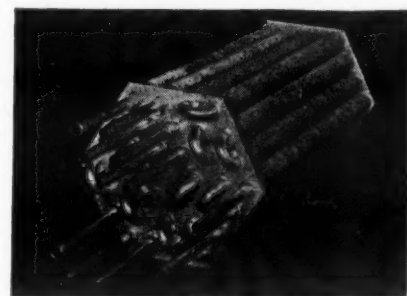
Spokesman for the coin machine industry point out that frozen foods, because of their uniformity of packaging and keeping qualities, make an ideal product for sale through coin operated vending machines. Rapidly increasing demands for frozen foods insure operators of a steadily expanding source of business for years to come.

Previous experiments with the sale of fresh foods through vending machines have proven unsuccessful because of the difficulty in establishing uniformity in price and quality, and size in the case of fruits and vegetables. The danger of spoilage was another deterring factor.

Developments in mechanical refrigeration, however, have opened a new market to the coin machine operators, the industry authorities believe. With refrigerated machines, frozen fruits, vegetables, and meats can be sold in standard-sized, convenient packages through machines in theater lobbies, apartment building foyers, and other places easily accessible to the public, they point out.

Other foods which require refrigeration to prevent spoilage also can be vended through machines as easily as ice cream and beverages, which already are being widely distributed in refrigerated coin machines.

ROME-CONDENSER ★ Jointless Type ★



Rome Water Cooled Condenser Coils insure trouble-free condensing equipment. Used by leading compressor manufacturers.

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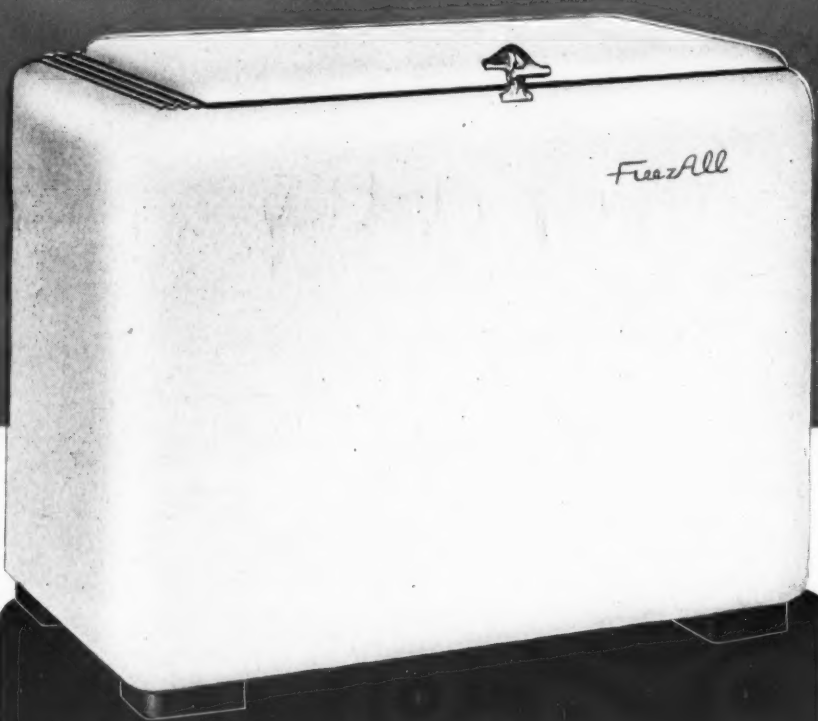
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FREEZ-ALL Chest Model...



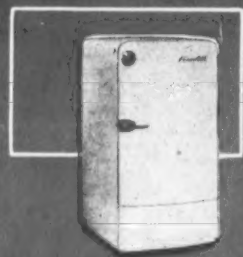
One of a Great Line...

Here is the Freez-All chest model—the one that rounds out your selling line of fine Freez-All home freezers. A large roomy 6 cu. ft. food storage compartment and a smart gleaming white cabinet gives customers added determination to own one. Its outstanding advantages and extra appointments plus its superior construction permit you to sell Freez-All with confidence.

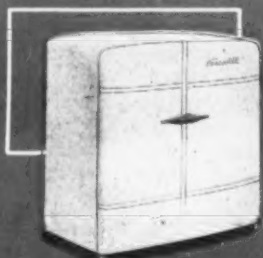
FREEZ-ALL

PORTABLE ELEVATOR MFG. CO.

REFRIGERATION DIVISION DEPT. 55 BLOOMINGTON, ILLINOIS



MODEL 50 FREEZ-ALL
The 5 cu. ft. drawer type model with sharp freeze compartment is 100



MODEL 100 FREEZ-ALL
Our 10 cu. ft. drawer type model providing extra storage space and 6 separate food storage drawers.

What to look for in hiring salesmen...



In the selection and hiring of his salesmen, the appliance retailer takes the first and most important step towards building the kind of business he wants to have. For upon their qualities . . . as men and as salesmen . . . depends in a large measure the success of his enterprise.

That's why this element is given such importance in Kelvinator's comprehensive Vocation-in-Sales Training Program . . . that's why one whole section of the guide "The Selection and Compensation of Retail Appliance Salesmen" is devoted to solid, factual, down-to-earth information and suggestions concerning the selection and hiring of the right kind of men. No "textbook theory," all of the subject matter is based on the practical experience of retail sales executives from leading department, furniture, appliance

stores and utilities, as well as Kelvinator sales executives, and supplemented by the technical research of outstanding vocational authorities.

Under Chapter 2, "What to look for in hiring salesmen," the following vital subjects are taken up in detail:

1. WHAT EXPERIENCE IS BEST?
2. WHAT EDUCATION SEEMS BEST?
3. WHAT DOES EARLY HOME BACKGROUND INDICATE?
4. WHAT ARE FAVORABLE SOCIAL FACTORS?
5. HOW ABOUT MANNER AND APPEARANCE?
6. WHAT MENTAL ABILITIES ARE BEST?
7. WHAT PERSONALITY QUALIFICATIONS SHOULD YOU LOOK FOR?

Here is "brass-tack" thinking . . . an important retail-minded contribution to sales management methods, which is based on the facts revealed by Kelvinator's famed Retail Sales Management Forum.

In every one of its other phases too, Kelvinator's great V. I. S. Program is retail-minded . . . because every phase grows out of a distinctively Kelvinator way of doing business that makes the Kelvinator Franchise . . .

*The most Valuable Franchise
in the Appliance Industry*

LOOK AHEAD WITH



Tune in N-K MUSICAL SHOWROOM Nash-Kelvinator's new hit musical show, with the Andrews Sisters, Curt Massey and Guest Stars—every Wednesday evening at 10:30 P.M., E.S.T.—Columbia Broadcasting System.

RETAIL-MINDED

Kelvinator

DIVISION OF NASH-KELVINATOR CORPORATION

Kenosha • Milwaukee • DETROIT • Grand Rapids • Lansing



Refrigeration Corp.-

(Concluded from Page 1, Column 5)
They will be of all-steel, all-welded construction including a one-piece stainless steel top.

Some of the other features he listed are: (1) a perfectly smooth surface, without dirt and grease catching ridges, (2) cork-board insulation, (3) slide-out unit with condenser accessible for cleaning, (4) hermetic condensing unit, (5) uniform temperature, (6) complete air circulation at base of cabinet yet rat proof, (7) guaranteed minimum pressure drop in lowside, (8) long-life snap-on flush rubber collars to prevent breakage by metal ice cream cans, (9) safety pressure valve as standard equipment on all models.

In the line of cabinets which will carry the FRIGID-FREEZE trade mark is an all-aluminum, self-defrosting walk-in of knock-down (KD) type, especially suitable for the hardening and holding of ice cream, and employing the blast-freezing principle of heat transfer.

The all-aluminum KD can be set up in four hours, it is claimed, through the use of prefabricated sections which are joined together by a patented locking device.

The KD is available in sizes according to need, from 150 to 750-cu. ft. capacity. The freezer unit is self-contained and is ready to connect to the nearest electrical outlet.

An unusual double-alarm system of sight and sound, known as "zero sentinel," is built into the KD to warn of a possible temperature rise beyond a fixed point. The alarm operates on its own power and cannot be affected by any interruption in the electrical circuit.

Davis Heads Sales For
Detroit Vapor Stove

W. M. DAVIS

DETROIT—Sales for the Detroit Vapor Stove division of Borg-Warner Corp. have been placed under the direction of W. M. Davis, manager of gas range sales for the corporation's Norge division.

Mr. O'Hara explained that Mr. Davis will continue to head the sales force for Norge gas ranges, meanwhile directing merchandising of the D. V. S. White Star line. He will be assisted by P. W. (Pete) Blew, J. S. (Jack) Plunkett, and C. H. (Jack) Scheuerman.

Carrier Assigns Sales
Rights on Bus Cooling

SYRACUSE, N. Y.—Carrier Corp. has entered into an agreement with Tropic-Aire, Inc., a subsidiary of The Greyhound Corp., whereby Tropic-Aire is to have exclusive rights, with certain exceptions, to sell Carrier air conditioning equipment for motor busses in the United States.

Under the terms of the agreement, Tropic-Aire will handle Carrier air conditioning equipment exclusively in its domestic sales to bus manufacturing, owning, and operating companies.

Total annual volume of business under the new arrangement was not predicted, but the announcement pointed out that "in the lively competition between bus, air, and railway companies for postwar travel, major emphasis will be placed on comforts such as air conditioning."

Gordon Heads Engineering
For Dayton Rubber Co.

DAYTON, Ohio—Appointment of L. B. Gordon to the new position of director of engineering of the Dayton Rubber Mfg. Co. has been announced. This groups all plant, electrical, power, and efficiency engineering as well as machine design and plant layout in one division.

Mr. Gordon takes his new position with a broad background in electrical and mechanical engineering and production, having held the position of director of engineering with one of the major rubber companies for more than 20 years.

R.E.W.A. Meeting--

(Concluded from Page 1, Column 4)
chairman of the R.E.M.A. credit committee.

R.E.W.A. will also consider the applications of a dozen or so wholesalers for membership in the association.

Following is the complete program:

SUNDAY, MARCH 3

10:00 a.m. Board of Directors Meeting—Room No. 4, Third Floor

MONDAY, MARCH 4

10:00 a.m. to 12:30 p.m. Registration of Members—North End—Third Floor Corridor

1:30 p.m.

Opening Session REWA Annual Meeting—Room No. 2, Third Floor

1. President's Message
2. Report of Executive Secretary
3. Reports of Standing Committees

(a) Government Contact Committee—G. J. Roche, Chairman

(b) By-laws Committee—G. J. Roche, Chairman

(c) Finance Committee—A. H. Holcombe, Chairman

4. Reports of Special Committees

Resolutions Committee—H. G. Stern, Chairman

5. Unfinished Business

6. Adjournment—5 p.m.

TUESDAY, MARCH 5

9:30 a.m.

Second Session, REWA Annual Meeting—Room No. 2—Third Floor

1. F. J. Hood, President REMA

2. H. T. McDermott, RSES

3. F. K. Zimmermann, Chairman REWA Credit Committee

4. "How Can The Regional Groups Best Serve The Association"—I. J. Fajans

5. "What The National Association Can Do For The Member Wholesaler"—G. J. Roche

6. New Business

7. Nominating Committee Report—T. I. Glou, Chairman

8. Election of New Directors (Directors meeting immediately following close of Annual Meeting to elect officers)

9. Adjournment at 12:30 p.m.

1:00 p.m.

REMA-REWA Meeting—North Ball Room—Third Floor

1. Report Manufacturers Relations Committee (REWA)—F. S. Langsenkamp, Chairman

2. Report Wholesalers Relations Committee (REMA)—George R. Allen, Chairman

3. Public Relations Program—Sills & Co., Inc.

4. Post War Markets—George S. Jones, Jr., Vice President, Servel, Inc.

Wednesday afternoon open for Conference Booth meetings—closing 5 p.m.

7:00 p.m.

REMA-REWA Banquet—Floor Show—Dancing—Grand Ballroom (Tickets \$7.00)

Westinghouse Appoints Nagel To New Post

PITTSBURGH—Appointment of Carl E. Nagel as manager of editorial service has been announced by Charles A. Scarlott, manager of engineering publications of the Westinghouse Electric Corp.

Mr. Nagel, a recently discharged veteran of World War II, will be responsible for the company's technical and trade magazine articles.

Mayfield Returns to Sales
Post with Kelvinator

WILLIAM C. MAYFIELD

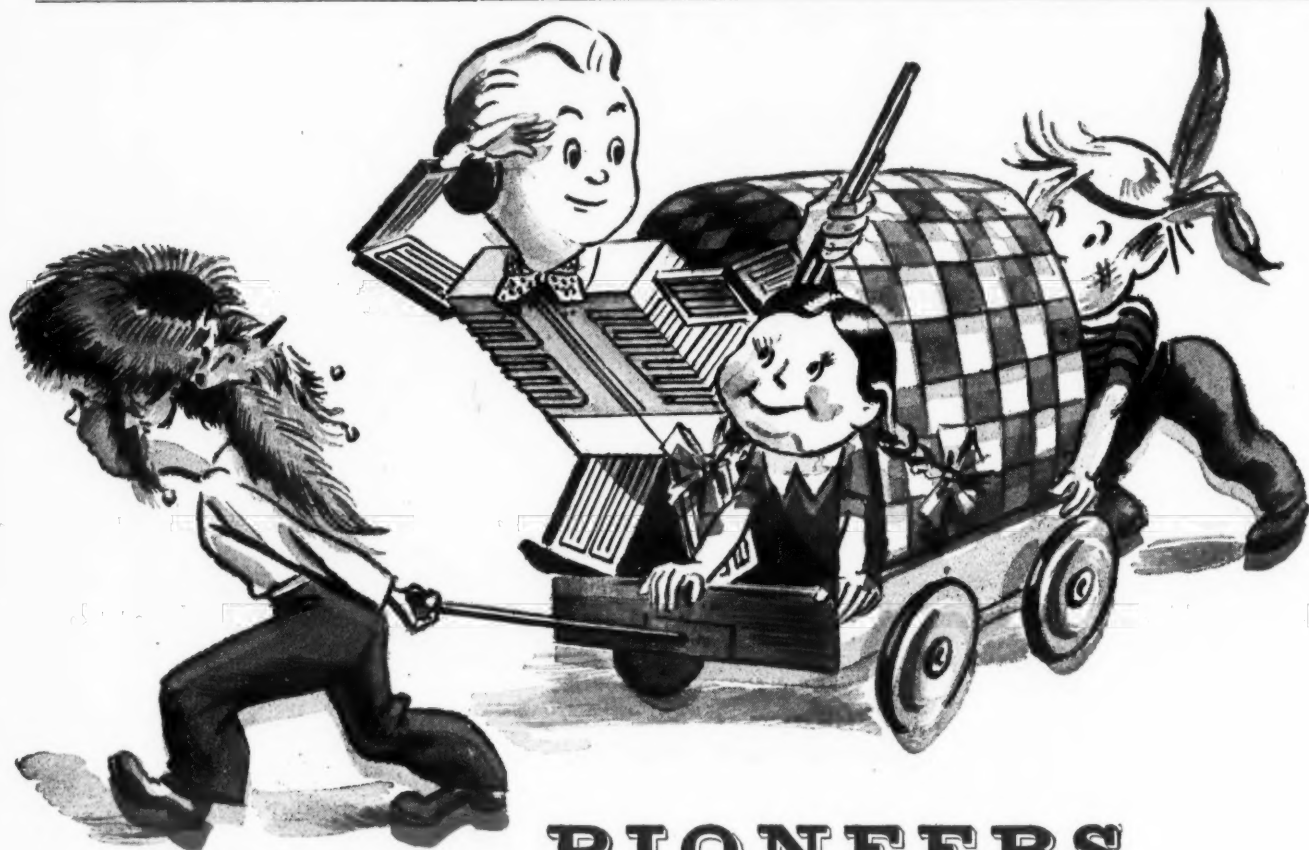
DETROIT—After 40 months in the armed services, William C. Mayfield has rejoined the Kelvinator division and has been appointed sales engineer in the contract sales department, reports T. A. Farrell, assistant general sales manager.

Mr. Mayfield joined Kelvinator in 1936 as commercial district representative in Cincinnati, covering several midwestern states. He became commercial district manager in 1940, holding that post until entering the U. S. Army in September of 1942.

Serving most of the period as a warrant officer charged with administration and liaison work, Mr. Mayfield was in the Pacific theater for 36 months.

New Building For Vernon
Refrigeration Co.

LOS ANGELES—Plans are being prepared for construction of a new store building on Olympic Blvd., Los Angeles, for the Vernon Refrigerator Co., to be 60 by 50 ft. in area and to cost \$12,000.



PIONEERS

STANGARD'S long years of experience in the refrigerating field plus their constant efforts for the betterment of low temperature equipment has resulted in their Prime Surface® Cold Plates. This plate...known for its uniform temperatures...faster pull-down...low first cost...economical performance...and trouble-free operation...makes for the highest degree of refrigerating efficiency.

The results of Stangard's pioneering will benefit you—take advantage of it!

Whether for locker plants...display cases...food counters...soda fountains...trucks...liquid coolers...ice cream cabinets...farm milk coolers...farm freeze cabinets...frosted food refrigerators...beverage coolers...rivet chillers...or low temperature test rooms...it pays to specify Stangard Prime Surface Cold Plates!

THE STANGARD-DICKERSON CORPORATION

46-76 Oliver Street, Newark 5, N. J.

*No intermediate factor between refrigerant and contact surface.

LITTLE "STAN,"
THE STANGARD MAN



STANGARD PRIME SURFACE COLD PLATES

Copyright 1945 by The Stangard-Dickerson Corporation

STANGARD KNOWS REFRIGERATION

It's a
REVELATION
—that's all!



- ★ Exclusive Dealer Franchise
- ★ Now in quantity production
- ★ All sizes: Industrial and Commercial
- ★ The last word in...

ELECTRIC
WATER
COOLERS

Revelation Company

Division of
Interstate Engineering Corporation
2600 Imperial Highway
El Segundo, California

Goddard-Hottel Form New Distributorship In Capital Area

WASHINGTON, D. C.—Goddard-Hottel Corp., a recently formed distributorship headed by William F. Goddard, president, and Harvey W. Hotell, vice president, has opened offices here and in Baltimore.

Mr. Goodard was formerly affiliated with the industry as special representative for heating, ventilating, and air conditioning equipment manufacturers to foreign and local trade. During the war he served as chief of the heating, plumbing, air conditioning, electrical, and mechanical sections of the engineering division, U. S. Engineer office, Washington, D. C.

Mr. Hotell has been active in the refrigeration, air conditioning, and cold storage fields for approximately 20 years, selling, designing, engineering, and supervising installations. Prior to the formation of the new corporation, he was connected with the local Carrier Corp. distributor as manager of the commercial refrigeration department.

The new organization will distribute the following heating, refrigeration, and air conditioning lines: Frick Co. refrigeration and air conditioning, Iceberg Refrigerated Locker Systems, Inc. locker and cold storage equipment, United States Air Conditioning Corp. air conditioning products, U. S. Thermal Control Co. automatic truck and transport refrigeration, Cyclotherm Corp. steam generators, and Union Iron Works high and low pressure boilers.

Frank Zumbro, Frick Engineer, Is Dead

WAYNESBORO, Pa.—Frank R. Zumbro, chief engineer of the ice and refrigerating machinery department of Frick Co., died of coronary occlusion at his home here on Feb. 17. He was one of the most widely known engineers in the refrigerating industry.

Mr. Zumbro was born at Mercersburg, Pa., March 22, 1890. After attending public schools in Chambersburg, Pa., he worked three years as a student apprentice with the Westinghouse Electric & Mfg. Co. Following this he attended Mercersburg Academy, and then went to Pennsylvania State College for two years; the last two years of his engineering training were taken at the University of Michigan, where he was graduated as an electrical engineer in 1915.

Early in 1920 he joined the engineering staff of Frick Co., and 15 years later was made chief engineer.

Mr. Zumbro was a past director of the American Society of Refrigerating Engineers, and served on many of its committees; he was also chairman of the engineering committee of the Air Conditioning & Refrigerating Machinery Association.

Dwight Ward Heads New Coast Company

LOS ANGELES—Dwight A. Ward & Associates have formed the Ward Refrigerator & Mfg. Co., capitalized for one million dollars, with executive offices at 916 I. N. Van Nuys Bldg., Los Angeles.

Mr. Ward has disposed of his interest in the partnership he formerly operated with his brothers under the same name. The new company, according to Mr. Ward, will manufacture and distribute from its new plant refrigeration units, both ice and electric, for domestic and commercial use, including home freezers, beer cabinets, cold storage doors, and kindred products.

New Conditioning Firm

LOS ANGELES—Air-Fresh Service is the firm name under which W. E. Morse has published a certificate that he is conducting an air conditioning business at 417 South Hill St., Los Angeles.

Chain Stores To Spend \$20 Million on Cooling

NEW YORK CITY—More than \$20,000,000 will be expended on air conditioning of chain stores throughout the country in 1946, compared with total expenditures of \$5,265,000 for such purposes in 1941, according to a survey made by *Chain Store Age*.

Based upon information from 517 chains operating 18,666 stores in all fields, the survey shows that 6.6% of all chain stores will be air conditioned this year, bringing the total of all units so equipped to 22.3%.

The survey indicated that jewelry chains will air condition 34.3% of their present stores and apparel chains will air condition 13.8% of their stores.

Percentages of stores in other chain store fields to be air conditioned were estimated as follows: Drug, 13.7%; candy, 13%; furniture, 11.5%; restaurant, 9.3%; variety and department stores, 7.6%; shoe, 3.2%; grocery, 2.4%, and auto accessory, 2.4%.

'Biggest Air Conditioning Contract In West' Is Let For Naval Ordnance Lab.

INYOKERN, Calif.—A contract, at approximately \$800,000, has been awarded to C. G. Hokanson Co. of 8373 Melrose Ave., Los Angeles, for the installation of an air conditioning system in the laboratory and shop building under construction at the Naval Ordnance Testing Station at the desert town of Inyokern, Calif., for the U. S. Navy, Bureau of Yards and Docks. The air conditioning is a subcontract.

It is said to be the largest single air conditioning contract ever awarded west of the Mississippi.

Food Storage Building

FILLMORE, Calif.—Building permit has been issued for construction of a food refrigeration building at 354 Fillmore St., Fillmore, Calif., for McMaster and Green. It will be 40 x 60 ft. in area and will cost \$8,500.

Master-Bilt Doubles Plant Capacity, Plans New Lines

ST. LOUIS—Master-Bilt Refrigeration Mfg. Co. will add farm and home freezers to its prewar line of walk-in refrigerators and milk and beverage coolers, the company has announced.

Recent purchase of a three-story factory building at Palm and North 11th Sts., for an indicated \$50,000 will add 54,000 sq. ft. of floor space, will add 54,000 sq. ft. of floor space. This addition will permit the doubling of the company's manufacturing area.

CORRECTION

In a recent story announcing a change in name of the La Crosse Novelty Box Mfg. Co. to La Crosse Cooler Co. the NEWS inadvertently listed W. W. Newberry as president. R. S. Denzer is president of the company, and Mr. Newberry is secretary-treasurer.

PRECISION MAKES PROFITS . . . When you sell Servel*




..... before it becomes dangerous!

Hidden leaks in refrigeration equipment cause serious damage to expensive installations and loss of costly products.

Years of use have proven **VISOLEAK** to be dependable, economical, safe and easy to use. See your refrigeration supply jobber, or write

Western Thermal Equipment Co.,
1701 West Slauson Ave.,
Los Angeles 44, Calif.

try **VISOLEAK** today

"BAKING OUT" STRAINS STRENGTHENS YOUR PROFIT PICTURE

The Servel workman above is starting to load a special type of oven, but he isn't making bread. He's baking Servel Supermetic crankshafts . . . an operation that's vital in building profitable business for you on Servel condensing units! Here's why:

When metals are forged and machined, internal strains are created in the metal. These strains, unless released, can cause the part to warp, or expand unevenly later on. So, after rough machining and surface hardening on the induction hardening machine, Servel parts are placed in this special oven.

Here they are heated to approximately 350° F. for about two hours. This mild heating "bakes out" the strains in the metal so that, after subsequent fin-

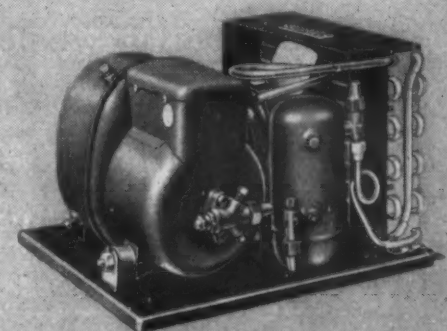
ishing operations, it will remain straight and true. It thus prevents some compressors from getting noisy, or binding in the bearing so as to increase the motor load and perhaps cause a shutdown.

Like all the other precision operations which go into the making of Servel condensing units, this "baking out" process strengthens your profit picture. It helps assure longer, better, more economical unit life. This, in turn, reduces service and sales costs, and cuts down on customer turnover.

For a description of a unit that will fit exactly your condensing unit needs, send today for your copy of our free folder, "Servel Supermetic." Address Servel, Inc., Division RN, Evansville 20, Ind.

*Servel's new "Supermetic" condensing units will serve dealers and fixture manufacturers in every vital field

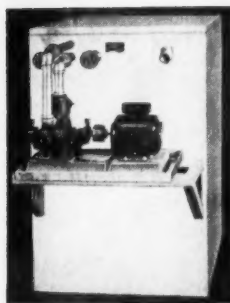
- | | |
|---------------------|---------------------------|
| 1. STORE FIXTURES | 6. ROOM COOLERS |
| 2. MILK COOLERS | 7. FARM FREEZERS |
| 3. HOME LOCKERS | 8. WATER COOLERS |
| 4. BEVERAGE COOLERS | 9. INDUSTRIAL COOLING |
| 5. VENDING MACHINES | 10. VEHICLE REFRIGERATION |



Servel, Inc.
Electric Refrigeration Division, Evansville 20, Indiana

This is one in a series of advertisements featuring the scores of new machine tools and processes now being used to produce Servel Supermetics. Reprints are available to dealers individually or in sets as series progresses.

Filtrine
HIGH EFFICIENCY
WATER COOLERS AND FILTERS



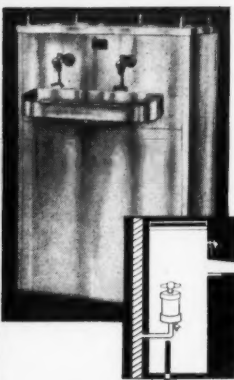
INDUSTRIAL TYPE
34° TEMPERATURE

for
DRINKING WATER AND INDUSTRIAL PURPOSES

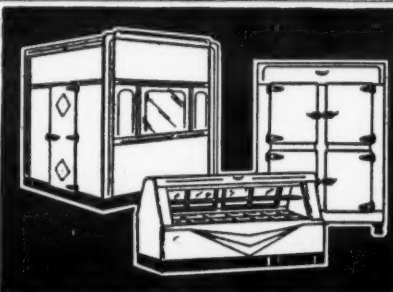
FILTRINE MFG. COMPANY
53 LEXINGTON AVE.,
BROOKLYN 5, N.Y.

Manufacturers of Water Coolers & Filters for over 40 Years

STAINLESS STEEL CAFETERIA COOLER



THE SMALL FILTER... SPARKLING WATER



GET SET WITH FOGEL

INQUIRE NOW ABOUT OUR COMPLETE LINE

INTERESTING PROPOSITION TO QUALIFIED DISTRIBUTORS
A FEW TERRITORIES STILL AVAILABLE

FOGEL REFRIGERATOR COMPANY Since 1899
5400 Eadom St., Philadelphia 37, Pa.

Pre-packaged Foods Sell Quickly From Open Display Cases, Independent Grocers Find

But Grocers Insist That the Wholesaler Must Perform the Pre-packaging Operation

NEW YORK CITY—That independent grocers showing a fast turnover should use open-type refrigerated display cases is one of the conclusions reached by the New York State Food Merchants Association, Inc., after conducting tests to determine the advisability of merchandising pre-packaged foods.

Made in somewhat the same manner as a similar experiment conducted in Columbus, Ohio, by the A&P Food Stores chain, the New York tests were carried out in suitable individual stores. Overall results were termed satisfactory.

It was concluded by the grocers that pre-packaged foods are preferred by consumers and that considerable competition can be expected from chain stores using this development. However, it was felt that all grocers can retail profitably pre-packaged foods, if the supply problem is solved.

This problem of who is to do the packaging appears to be the one disturbing factor at present. The individual grocer does not want to assume this burden himself, and thus far efforts to induce the wholesale suppliers to perform the process on a daily-delivery basis have not been successful. Likewise, attempts to persuade farmers to package their fresh produce have been largely in vain.

It is reported that similar efforts to arrange for packaging at the source are being made by consumer-owned cooperatives, which also are interested in merchandising pre-packaged foods.

The co-ops are said to be considering a plan to pre-package foods at their warehouses and make daily deliveries with refrigerated trucks, if contracts with farmers cannot be worked out.

In attempting to find a solution to this problem, the New York association decided that pressure must be placed on warehouse operators to sell pre-packaged foods.

Reporting the results of its experiment, the association said one grocer's cheese sales volume shot up 600%.

The grocer, who pre-packaged cheese and delicatessen products himself, declared that the system will be a success in any store where the turnover is fast, even with the additional cost of maintaining a display case.

In increase of 300% in the volume of his delicatessen business was reported by another grocer. By distributing ends and beginnings among slices from the center, meat waste was almost wholly eliminated, he said.

In addition to advocating purchase of display cases and suggesting pressure on wholesalers to sell pre-packaged foods, the association reported to its members that:

1. Pre-packaging is a "must" for self-service stores, which thus will become 100% self-service.
2. Packaging costs will be far outweighed by high volume and low labor costs.
3. Foods previously impractical to stock can be sold by small stores in pre-packaged form due to the saving in space and convenience in handling.
4. Retailer-owned cooperatives, which may be a solution to the independents' troubles, are equipped to achieve the best results.

Takes Food Post



MAJ. LAWRENCE J. STOLL

On terminal leave from the Army Quartermaster Corps, Maj. Stoll was recently appointed president and member of the board of directors of Frozen Food Products, Inc. Prior to his Army service Maj. Stoll served nine years in a merchandising capacity with R. H. Macy & Co.

4 Development Directors Appointed by Carrier

SYRACUSE, N. Y.—Four directors of development have been appointed in the engineering division of Carrier Corp. here, according to Herbert L. Laube, vice president in charge of engineering.

Those named were Sam F. Shawhan, director of the air conditioning development department; R. Wayne McLaughlin, centrifugal refrigeration development department; J. Loren Fletcher, package units development department; and Lars Hanson, reciprocating refrigeration development department.

Each director of development will supervise a specific development department, including a staff of product engineers, development engineers, and associated technical personnel, Mr. Laube concluded.

For
PEAK PERFORMANCE
On All Refrigeration Installations . . .



remember these symbols!

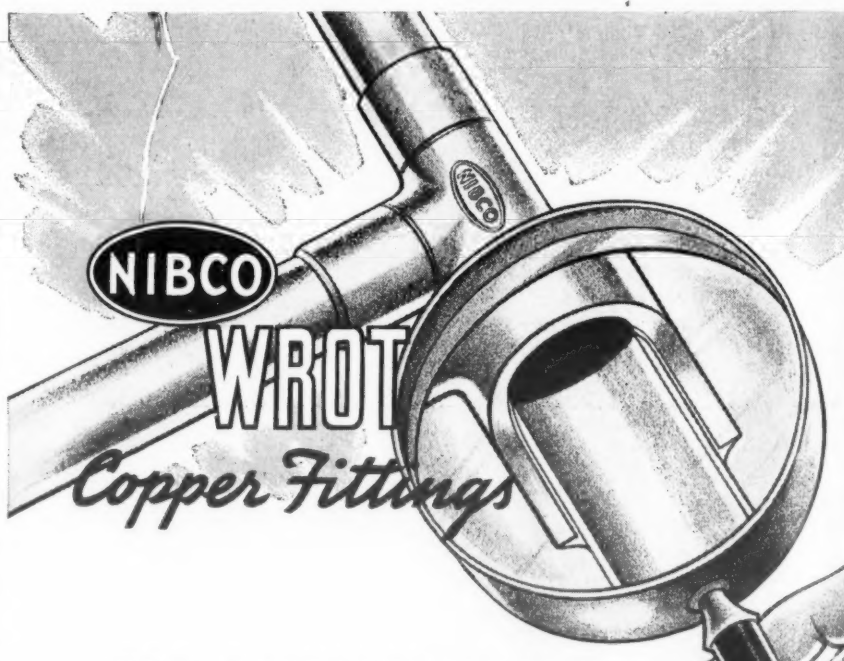
SPORLAN "C" CHARGE FOR SUCTION TEMPERATURES Above ZERO
SPORLAN "Z" CHARGE FOR SUCTION TEMPERATURES Below ZERO

Your Sporlan wholesaler stocks the full line of Thermostatic Expansion Valves with Selective Charges to meet any operating conditions. Always consult with him before ordering and be assured of peak performance on all installations.

Sporlan Manufactures
SOLENOID VALVES
SOLENOID PILOT CONTROLS
MODULATING PILOT CONTROLS
REFRIGERANT DISTRIBUTORS
and the only
THERMOSTATIC EXPANSION VALVES
with SELECTIVE CHARGES

SPORLAN VALVE COMPANY

3723 COMMONWEALTH AVENUE
ST. LOUIS 17, MISSOURI



FOR REFRIGERATION AND AIR CONDITIONING

THE joint is stronger than the tube when NIBCO WROT Fittings are used. Because every Fitting is perfectly formed and accurate tolerances are maintained by individual plug testing, NIBCO WROT Fittings are easier to use and save labor in production operations. They are light in weight and dense in structure . . . impervious to gases. You can eliminate service troubles by using vibration-proof and corrosion-proof NIBCO WROT Fittings.

Write for Catalog

NORTHERN INDIANA BRASS CO.
ELKHART, INDIANA
VALVES AND FITTINGS SINCE 1904

Repair Shops Can't Adjust Prices for Wage Boosts

WASHINGTON, D. C.—Small repair shops for appliances, motor vehicles, and farm equipment cannot automatically increase their ceiling prices on account of wage increases granted their employees, the OPA declared in an action made effective Feb. 9.

Until last August such shops, with not more than eight employees, had authority to increase their ceiling prices to compensate for wage increases to employees. A report of such action merely had to be filed with the local price board.

Since August, 1945, wage increases could not be considered as a basis for increasing price ceilings for these repair shops (under the government's wage-price policy established at that time). The present action merely brings the price ceiling provisions in line with this change.

Lee Wells Named Vice Pres. Of Merchandise Distributors

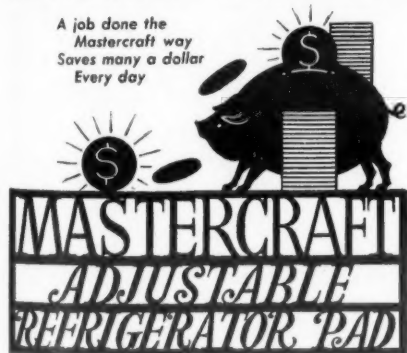
BUFFALO—Lee Wells, formerly manager of the company, has been elected vice president of Western Merchandise Distributors, Inc., here, according to an announcement by E. B. Ingraham, president.

Prior to becoming manager five years ago, Mr. Wells held the position of treasurer. Previously he had been employed in the merchandising department of Westinghouse Electric Corp. in New York City. Western Merchandise Distributors, Inc., handle Crosley and Universal products, and many other electrical and house-ware lines.

Thornhill Opens Store With 'Drive-In' Facilities

CRESTON, Iowa—Charles Thornhill has opened the first appliance store dealing strictly in major appliances to be established here. Featuring "drive-in" facilities for customers, the Thornhill Appliance Store will offer complete home appliances for town and rural residents, refrigeration and electrical repair service, and radio repairs. All work will be done by Creston war veterans who received electrical training in the Army or Navy.

NATIONALLY ENDORSED



"A penny saved is a penny earned"—You'll save many a penny and dollar too if your moving equipment includes a Mastercraft Adjustable Refrigerator Pad and Carrying Harness. They're doubly economical because of their adjustability to any size cabinet. The pad, sturdily constructed to furnish protection from scratches and marks is priced at \$11.75 each. Harness at \$9.50 each.

Attractive lettering of your name on pad at \$2.00 each extra.

Write today for complete folder and prices on pads for refrigerators, home freezers, washers, ironers, ranges, radios; also furniture pads and protective slipcovers.

BEARSE MANUFACTURING CO.
Incorporated 1921
3815-3825 Cortland Street
Chicago 47, Ill.

Range Prices

Florence Electric Model Starts at \$141.95

WASHINGTON, D. C.—Maximum retail prices established by OPA on the Florence Stove Co.'s Model E113H electric range under Order 250, MPR 64, are: Zone 1, \$141.95; Zone 2, \$144.25; Zone 3, \$147.25; and Zone 4, \$149.95.

These prices include the Federal excise tax, delivery, installation with connection to the electrical facilities provided by the purchaser, and a one year warranty.

Ceiling price for sales by distributors to retail dealers is \$81.36 f.o.b. Newark, Ohio, irrespective of zone, OPA declared.

Model E113H is manufactured for the Florence Stove Co. by the Newark Stove Co.

Prices Assigned for 15 Waterman Gas Ranges

NEW YORK CITY—Fifteen models of gas ranges manufactured by Henry Waterman & Bro. Corp. here have been priced by OPA on a zone basis for sales to ultimate consumers in Order 251 to MPR 64.

The following prices include Federal excise tax but no state or local taxes, and also include installation by the dealer. The dealer must deduct \$6 if he does not provide installation.

Model	Zone 1	Zone 2	Zone 3	Zone 4
1636-1-1-A-1	\$66.75	\$68.50	\$69.75	\$72.25
1636-1-1-A-2	76.95	78.75	79.95	82.50
1636-1-1-A-3	69.95	71.75	72.95	75.50
1636-1-1-A-4	80.25	81.95	83.25	85.75
1636-4-1-B-1	67.95	69.95	71.25	73.75
1636-4-1-B-2	78.25	80.25	81.50	83.95
1636-4-1-B-3	71.25	73.25	74.50	76.95
1636-4-1-B-4	81.50	83.50	84.75	87.25
1224-REF-E-1	56.75	57.95	58.50	59.95
1630-D-3-C-1	67.25	68.95	70.25	72.50
1630-D-3-C-2	77.50	79.25	80.50	82.75
1630-D-3-C-3	68.75	70.50	71.75	73.95
1630-D-3-C-4	78.95	80.75	81.95	84.25
20-V-5-D-1	61.25	62.50	63.25	64.75
20-V-5-D-2	71.50	72.75	73.50	74.95

The above prices are subject to the seller's customary terms, discounts, allowances (other than trade-in allowances), and other price differentials in effect on sales of similar articles, rules OPA. Ranges must be ticketed by the manufacturer.

OPA Fixes Zone Prices On 3 Columbus Gas Ranges

WASHINGTON, D. C.—Maximum zone prices for both dealers and ultimate consumers have been announced by OPA for three models of gas ranges produced by the Columbus Stove Co. in Amendment 1 to Order 213, MPR 64.

Prices on sales by distributors to dealers are, as follows:

Model	Zone 1 Each	Zone 2 Each	Zone 3 Each	Zone 4 Each
75XLI	\$50.30	\$51.71	\$53.86	\$55.74
75XLIT	55.13	56.69	58.88	60.75
81XLIT	56.25	57.65	59.84	61.72

The above prices are f.o.b. distributor's city and are subject to the usual terms, discounts, allowances, and other differentials in effect on similar articles. If the dealer requests that any range be equipped for bottled gas, the distributor may add \$1.09 to prices shown.

The following prices are for sales by dealers to ultimate consumers:

Model	Zone 1 Each	Zone 2 Each	Zone 3 Each	Zone 4 Each
75XLI	\$84.25	\$86.50	\$89.95	\$92.95
75XLIT	91.75	94.25	97.75	100.50
81XLIT	93.50	95.75	99.25	102.25

Delivery and installation are included in the above. The dealer who doesn't provide installation must subtract \$6 from these retail prices. He may, however, add \$1.70 to the ceilings for ranges equipped for bottled gas.

Zone 1 in both the above tables is Ohio.

Electromaster Stock Sale To Finance Expansion

DETROIT—Plans for the public sale of 200,000 shares of additional common stock to raise \$750,000 for building expansion and extra working capital were revealed recently by Electromaster, Inc., here, along with announcement that construction has been started on a new plant in Mt. Clemens, Mich.

In addition to approving sale of stock to the public through an underwriting group, Electromaster directors voted to issue one additional share of common stock for each of the 200,000 shares now outstanding. This is in keeping with the two-for-one stock split-up proposal agreed to by stockholders at a meeting in January.

Construction of the Mt. Clemens plant, which will have 75,000 sq. ft. of floor space, is being financed by a 10-year bank loan.

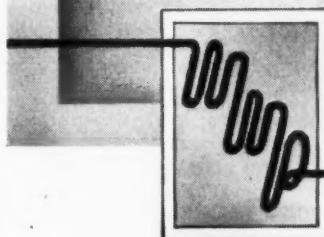
Westinghouse Supply Names Lovdal North District Head

MILWAUKEE—Ralph E. Lovdal has been appointed manager of the northern district of the Westinghouse Electric Supply Co. with headquarters in Milwaukee.

The new manager succeeds Roy L. Brown who has been transferred to New York City as manager of the eastern district.

Born in Superior, Wis., Mr. Lovdal was formerly sales manager, then district apparatus and supply manager for the Milwaukee branch.

DO YOU KNOW THAT THE WALL WIRE PRODUCTS COMPANY MAKES ALL SORTS OF FORMED AND WELDED WIRE PRODUCTS FROM CARBON STEEL AS WELL AS STAINLESS STEELS? WE SOLICIT YOUR INQUIRIES



WALL WIRE PRODUCTS COMPANY

11333 GENERAL DRIVE
PLYMOUTH, MICHIGAN

Makers of STAINLESS STEEL AND
RETINNED REFRIGERATOR SHELVES AND WELDED WIRE PRODUCTS

Q. How thick need insulation be?

A. Only half as thick... if you use SANTOCCEL

It's true... Santocel* is the world's most efficient porous insulating material... walls and doors of cabinets, freezer units, etc., can be half as thick as when conventional insulation is used. That means up to 40% more storage space with no loss in efficiency. It means savings in costs of manufacture; it means savings in precious space and weight... especially important in refrigerated transport.

How does Santocel do it?...

Santocel is a product of Monsanto research... a unique silica aerogel that achieves its unprecedented efficiency through its cellular construction.

Santocel is actually 90% air, trapped in spaces about one-millionth of an inch in diameter, by walls one ten-millionth of an inch thick. Air may move within these tiny cells, but only an infinitesimal distance... hence heat conductivity is relatively nil.

If you are planning any type of refrigeration equipment, or have a hand in the design of any of this type equipment... find out now about Santocel. Full technical data, samples of Santocel, or answers to your particular questions may be had by addressing: MONSANTO CHEMICAL COMPANY, Merrimac Division, Everett Station, Boston 49, Massachusetts.

Quick facts about SANTOCCEL:

- 1. INSULATING VALUE:** Thermal conductivity of Santocel is lower than that of any other material or methods of insulation employed except a highly evacuated, silvered-surface space.
- 2. DENSITY:** Although low for a free-flowing powder, Santocel's density is about equal to that of other loose fill insulators and is higher than some bat types and the foil types.
- 3. APPLICATION:** Santocel can be applied by building a retaining jacket about the object to be insulated, usually of lightweight sheet metal, and filling the intervening space. Being free flowing, it can be easily applied to such a construction.
- 4. SETTLING:** Santocel settles to a stable density about as rapidly as other fill types.
- 5. MOISTURE SORPTION:** Like all commonly used insulators, Santocel will not pick up significant quantities of water from the air.

Santocel: Reg. U.S. Pat. Off.

MONSANTO CHEMICALS
SERVING INDUSTRY...WHICH SERVES HUMANITY

WANTED Research Engineer

Established mid-western manufacturer of domestic electric refrigerators has an opening for a refrigeration engineer fully qualified to develop and supervise a research program on future products.

Box 1929, Air Conditioning & Refrigeration News

Inside Dope

By George F. Taubeneck

(Concluded from Page 1, Column 1)

"Always Sell Your Own Product."

Quote:

"There is an old saying among salesmen to the effect, 'If your competitor talks about you, put him on the payroll, no matter what he says.'"

"Of course, no McCray salesman would think of knocking a competitor—that went out of date with peg-top pants and bow-in-the-back derbies. But the following story shows how any mention at all of a competitor may work to his favor. So perhaps the best plan is just to pretend you never heard of a competitor, or at least play dumb when a competitor's name comes up. The story is this:

"A certain sales executive's phone rang one morning and a prospect on the wire asked for information on one of the company's products. After a short conversation, the sales executive arranged to go over at once to see the prospect, with the result that the prospect signed an order and the equipment was later installed.

"After the job was all in, the salesman asked the prospect how he had happened to call in that morning to inquire for information. This is what the customer told him:

"I didn't know your company sold the equipment I needed, but your competitor's salesman mentioned your name when I told him his price was a little high. He said I must have

been talking to that So-And-So crowd. That gave me an idea. I dismissed him, called your office and placed the order with you when you came over. If he hadn't mentioned your name, I wouldn't have thought of you at all."

"Sell your own goods, and let competitors sell theirs. No matter what you say about a competitor, good or bad, it helps him to get the order away from you."

Minor Difference

To close this column with a smile, here's an anecdote some of our friends seem to like:

A party of clergymen were attending a Presbyterian conference in Scotland. One afternoon they set out to explore the district, and came to a river spanned by a temporary bridge.

They didn't see the notice that the bridge was unsafe, and so started to cross.

The bridge-keeper ran after them in protest.

"It's all right," reassured a spokesman, not understanding the reason for the old fellow's haste.

"We're Presbyterians from the conference."

"I'm no caring about that," cried the old Scot bridgetender, "but if you dinna get off that bridge ye'll all be Baptists!"

Refrigerators, Freezers, Milk Coolers Top List Of Many Appliances Scheduled for Co-ops

By Ross Potter

CHICAGO—The Co-op line of farm freezers, refrigerators, and milk coolers scheduled to appear as soon as national material and manpower delays allow will be the forerunners of a much larger group of household appliances being planned by National Cooperatives, Inc., in the months to come, according to Otto A. Nurkkala, purchasing coordinator for the co-op's appliance program.

Leading the list will be conventional type washers and vacuum cleaners, followed by electrical and gas ranges (with bottled gas a possible feature), electric roasters, oil and kerosene circulating heaters, and smaller appliances. The first two washers will have tub capacities of 8 and 16 lbs. of wet clothes, with two more models to come later.

All the appliances will appear under the Co-op trademark, but they will be manufactured by various other producers until such time when production by the NCI becomes practical, Mr. Nurkkala said.

Production plans for freezers, refrigerators, and milk coolers are ready for the immediate future, however. Four freezers definitely have been scheduled, starting with an 8-cu. ft. box, then a 16, then a 4, and a 6. Other sizes will follow later.

The matter of sizes was given considerable study, beginning almost two years ago with an extensive survey of the farmer's needs and of

market conditions, material production possibilities, and the reports of various university experimental laboratories on frozen foods. The 8-cu. ft. box emerged as the practical minimum for farm use, with the 16 as the next most popular size. The 4 and 6 will be for suburban consumers and city dwellers with farm connections.

Manufacturers for the co-op will be the Franklin Transformer Co., of Minneapolis, which will make a single compartment unit in all four sizes, and the Savage Arms Corp., of Utica, N. Y., which will make double compartment freezers in 6, 12, and 20-cu. ft. capacities, Mr. Nurkkala reported.

All will be chest types with top opening. The double compartment models will include a small quick freezing chamber. The cost would be too high for a large processing chamber, the co-op believes, and the existence of several hundred co-op locker plants across the country should take care of major processing jobs.

MARKETS COVER 40 STATES

The anticipated market is of course the country's agricultural states, roughly those 40 states north of the Ohio and west of the Mississippi. Of these, the central states are the strongest, and it is here that National Cooperatives is most active.

Production schedules, once full production is under way, will total 20,000 units, Mr. Nurkkala stated. Sample units would have been in the dealers' hands by the end of January, but this and every other refrigeration production schedule has suffered relapses during the past month.

The only refrigerator planned for immediate production is the Co-op 9-cu. ft. box, designed by Barnes & Reinecke of Chicago and built by Ranney Refrigerator Co. of Greenville, Mich. It will be powered by a 1/4-hp. hermetically sealed Tecumseh compressor.

Other specifications call for a top center evaporator (made by Bohn Aluminum), static condenser, capillary lined refrigeration indicator, Cutler-Hammer or Ranco controls, externally mounted; Thermo-Craft insulation, Dulux exterior finish, sliding and pickout shelves, six ice trays, glass meat holder under the evaporator, and porcelain acid-resistant inner lining.

Prices for both refrigerator and freezers still are being worked out by OPA, but in each instance they will be approximately the same as those of recognized brands of the same capacity, Mr. Nurkkala said.

National Cooperatives does not include all of the cooperative units scattered across the farming states, but it is the largest and most active association. Its Universal division makes the Co-op Universal milking machines, and its Strauss Electric Appliance division makes the association's dairy and household electric water heaters.

5,000 MILK COOLERS SEEN

A plant now under construction at Albert Lea, Minn., will make the Co-op milk cooler, engineered and worked out largely by the Co-op laboratory staff at Waukesha, Wis. Anticipated production, once this gets under way, is 5,000 coolers in the first six months. Prices are pending.

Production will begin with a 4 can unit, Mr. Nurkkala stated, with a 6, an 8, and a 12 after that. National Cooperatives have handled milk coolers since before the war, but until now has never made its own.

Whether or not the co-op makes the units, or buys them from another manufacturer, or indeed handles them at all imposes no responsibility on the local cooperative groups. Each one is free to purchase what and where it will.

The local co-ops that do merchandise these appliances manufactured under the Co-op brand name will be required, however, to maintain complete appliance departments, staffed with personnel familiar with the sales and servicing end of each Co-op appliance handled.

Because of the greater distances that have to be covered, and because the farmer who buys usually also is

a member of the local unit he buys from, service promises to be a major responsibility.

Other demand conditions have to be figured in, too. Farmers sometimes set cans of milk or quantities of produce temporarily in their household refrigerators. And in various western and southwestern states, sustained high temperatures put greater loads on refrigeration equipment.

These conditions must be allowed for. Thus the Co-op 9-cu. ft. refrigerator, instead of having the usual 1/4-hp. compressor, will have a 1/2. The larger power unit will demand less frequent servicing, the Co-op's appliance committee believed.

Because the Co-op brand will have national distribution, service and parts will have to be assured on that basis. The customer must be guaranteed service on his Co-op appliance no matter where he buys it or where he moves to after that, Mr. Nurkkala explained.

SERVICE WARRANTY

The service warranty thus is a joint agreement between National Cooperatives, Inc., the regional distributor, and the local unit. Availability of parts is guaranteed by the national group, a stock of all main parts must be carried by the regional group, and a stock of those parts most often called for, plus installation and repair facilities, is the local unit's responsibility.

This is the general picture. It can be modified according to local conditions—where it is more practical for a centrally located regional distributor to maintain the servicing staff, for instance, and for the local outlets merely to display and sell the merchandise.

As far as controls within the organization are concerned, each local co-op is an independent unit, as pointed out above, free to buy from any source it finds profitable.

When a group of farmers gets together and sets up a local unit, they buy direct control over it by purchasing stock. Returns from this stock operate at a fixed rate of interest which is low enough to keep speculative buying out of the picture.

There are no profits as such. Amounts remaining on the credit side of the ledger after periodic balancings are rebated on the basis of the exact purchases made. Rebates are made not only to members but to anyone who buys from the co-op retail outlet.

Membership in the local cooperative unit also is open to anyone who wishes to buy stock. The co-op recommends allowing your rebates to ride until you have enough "banked" to buy a share of stock. There is little cash profit in the dividends themselves; the idea is that the more cash reserve a co-op has, the bigger its buying transactions can be, and the more goods you can then buy and eventually save money on.

CENTRAL BUYING SETUP

The local co-ops set up and control their own regional wholesale cooperatives. These central buying organizations each are administered by a board of directors elected by the members of the local units it buys for. The regional co-ops elect, from among their own members, the board of directors that governs the activities of the national group.

This group, National Cooperatives, Inc., investigates potential sources of supply and turns in its reports to the regional units. They make the final decisions on contract specifications, prices, and desired volume.

The national group carries out the actual contract negotiations, and keeps the regionals informed on developments.

The picture of the increasing annual business being done by the regional outlets of National Cooperatives alone gives some indication of the growth of the co-op movement. Here are the figures released by Mr. Blackburn:

1939	\$ 50,438,000
1940	\$ 61,238,000
1941	\$ 86,146,000
1942	\$107,103,000
1943	\$128,086,000
1944	\$156,380,000
1945	\$180,000,000*

*approximately

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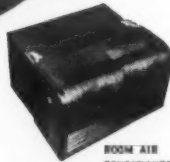
Westinghouse Water Coolers are practical, efficient, low-cost equipment which will satisfy the buyer and lead to more sales.

These units are powered by the famous Westinghouse hermetically-sealed refrigeration unit . . . completely sealed against dirt and moisture. Years of research and development by Westinghouse engineers assure your customers a long period of economical, trouble-free service.

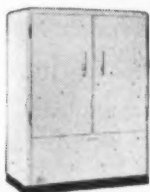
A Westinghouse Water Cooler is but one of a complete line of Packaged Refrigeration Products . . . backed by effective advertising and sales helps . . . Our representative will show you our complete package portfolio of practical selling helps—The Refrigeration Specialties Handbook. A Westinghouse franchise will provide you with the sales advantages of this complete line.



WATER COOLER



ROOM AIR CONDITIONER



REACH-IN REFRIGERATOR



COMPLETE MILK COOLER

EASY TO APPLY—Complete factory-prepared application data and capacity tables provided to simplify your job.

EASY TO INSTALL—Complete packaged units ready to plug in—no wiring or assembling necessary.

EASY TO SERVICE—Complete and detailed factory instructions specially developed for dealer servicing—hermetically-sealed construction simplifies replacement if necessary.

FOR DETAILS about the availability of these products write to Westinghouse, 653 Page Blvd., Springfield 2, Mass.

Packaged Refrigeration by **Westinghouse**



8,000 Visitors and Would-be Customers Jam Sterling's New Appliance Dept.

By Robert Latimer

SAN FRANCISCO—Honorably discharged veterans were given special consideration during the sensational "Preview Week" which Sterling Furniture Co., San Francisco, staged recently to introduce its new 6,000 sq. ft. radio and appliance department.

Commemorating at the same time the store's 77th anniversary, Sterling Furniture Co. went to Pacific Gas & Electric Co. plus many appliance wholesalers to obtain a huge new stock of appliances to be placed on view. Four full page newspaper advertisements and a half a dozen radio spot programs were used to invite the public to visit the handsome new department, which is arranged for "functional display" throughout. All appliances and radios are "live displays" actually operating on the floor, and are keyed in with the store's new Advisory Home Bureau.

This is the first such home planning department to be operated by a furniture store in the city, utilizes a midjet motion picture theater, scrap books, sketch books, and an expert attendant to help San Francisco housewives to plan all-electric kitchens.

Guy Farwell, manager of the new department, created a constant crowd in front of the store, with a huge window display of radios, refrigerators, washing machines, and ranges which was the first such seen in over three years in the Golden Gate city. Altogether, more than 8,000 visitors crowded the department during the

first two days of the Preview Week, and were shown the last word in radios and appliances.

Naturally the entire saleable stock which Mr. Farwell had unobtrusively accumulated in advance of the promotion was sold out on the first day. At least one model of each radio and major appliance to be stocked later on was retained for display only, and marked with a sign reading "No Delivery for 30 Days" or whatever the period estimated was.

"Since we couldn't actually sell all these people we took the next best step," Mr. Farwell explained. "This is our Appliance Register, a prospect book in which we list every radio and appliance which we will carry in the future. The sheets are large, 25 by 18 in., with space for the prospect to write in her name, address, and telephone number opposite the listing of the item desired."

Hundreds of women took advantage of this. We will follow each one up as we get large shipments of merchandise."

Veterans will get first call on everything, under Mr. Farwell's future policy.

"We have reserved every fifth space in the appliance register for ex-servicemen," Mr. Farwell said, "in view of the large number of requests we have had from soldiers and sailors who want to buy a radio right away. The first deliveries will be made to this bracket of customers as regular store policy. In addition, I'm also setting aside a certain percentage of all shipments received for veterans who were not able to get into the store and put their names on list during the Preview Week. These boys deserve everything we can do for them."

Witkop & Holmes Buys Building It Occupies

BUFFALO—The Witkop & Holmes Co., local dealer, has purchased the building it occupies at 379 Washington St. from the Molin Corp.

Pittsburgh Dealers Mart Planned for March 4-6

PITTSBURGH—The tenth Merchandise Mart of the Wholesale Merchants Division of the Chamber of Commerce will be held at William Penn hotel here March 4, 5, and 6, announces E. M. Marks, secretary of the Wholesalers' Division. An official AAU boxing contest and entertainment will also be provided for dealers attending the mart, he said.

Following is a list of the exhibitors and the merchandise they will display:

Hamburg Brothers (RCA radios, Electrolux refrigerators, Thor washers, and gladiators, Royal vacuum cleaners, Estate ranges, American kitchens, and home freezers).

C. R. Rogers Co. (Philco radios and refrigerators, Universal ranges, washers, and table appliances).

Ludwig Hommel & Co. (Norge refrigerators, washers, and ranges; Stromberg Carlson radios; Bendix automatic washers and ironers; Hamilton dryers; and Columbia records).

J. A. Williams Co. (Zenith radios, ABC washers and ironers, Youngstown steel kitchens, Grand ranges, Eureka vacuum cleaners and cordless irons, Coolerator refrigerators and chests, and General Electric traffic appliances).

Joseph Woodwell Co. (Arvin radios and steel furniture, Crown ranges and table appliances).

L. H. Smith Co. (Sonora radios; "Beevac" washers, vacuum cleaners, and table appliances).

Stern-Kay Co. (Admiral radios and refrigerators, Speed Queen washers and ironers).

Kim Electric Co. (Automatic radios, lighting fixtures, and table appliances).

Houston Starr Co. (Tracey stainless steel top kitchen units).

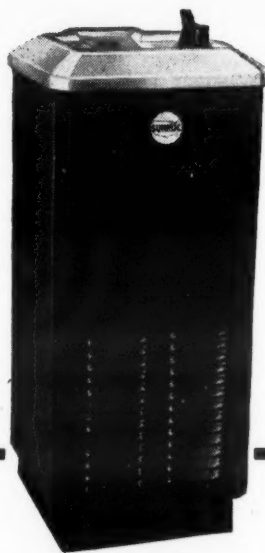
Tydings Co. (Wilcox-Gay radios, Recordio and Olympic radios).

State Electric Co. (Fada radios and combinations, table appliances, and lighting fixtures).

Logan Gregg Co. (Admiral radios and table appliances).

Morris Electric Supply Co. (Samson traffic appliances and lighting fixtures).

"ONE PRODUCT, ONE PRICE, ONE POLICY" ... AND ASSURED PROFITS!



Highly perfected Sunroc Water Coolers, backed by the finest advertising, promotional, and merchandising program in the industry, have won nation-wide acceptance. Mounting demand is met by a complete line of AC and DC models...unparalleled in their dependability and economical, trouble-free operation...to meet every business, industrial and institutional need.

National distribution of Sunroc Water Coolers is achieved through more than 100 carefully selected, top-flight distributors, in key locations, from coast to coast. The benefits of national distribution accrue to every distributor, through volume-production, and through the prestige of a nationally-known name.

The outstanding merit of the Sunroc product is reflected in its representation:

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Louisville—The Continental Co.

LOUISIANA
New Orleans—Walther Brothers Co.
Shreveport—Electric Supply Co., Inc.

MAINE
Lewiston—Hall & Knight Hardware Co.

MARYLAND
Baltimore—Shepherd Electric Co., Inc.
Cumberland—Joseph S. Karp & Brothers

MASSACHUSETTS
Worcester—Walker Electrical Supply Co.

MICHIGAN
Ann Arbor—Ann Arbor Appliance Co.
Battle Creek—Central Electric Supply Co.

MINNESOTA
Detroit—Mercier & Spalding, Inc.
Grand Rapids—L. H. Udell & Sons
Menominee—Northern Hardware & Supply Co.
Saginaw—Morley Brothers

MISSISSIPPI
Jackson—Cabell Electric Co.

MISSOURI
Kansas City—Kilby Johns Co.
St. Louis—The Artophone Corp.

NEBRASKA
Omaha—General Appliance Co.

NEW HAMPSHIRE
Manchester—New Hampshire Hardware & Plumbing Supply Co.

NEW JERSEY
Newark—Northern Air Conditioning Corp.

NEW YORK
Albany—J. M. Steinhardt, Inc.
Binghamton—Southern Tier Electrical Supply Co., Inc.

NEW YORK
Buffalo—Radio Equipment Corp.
New York City—Factory Branch
Olean—LeValley-McLeod-Kinkaid Co., Inc.

NEW YORK
Rochester—Gould-Farmer Co., Inc.
Syracuse—Alexander Grant's Sons

NORTH CAROLINA
Charlotte—Southern Radio Corporation
Durham—Noland Co.
Raleigh—Noland Co.
Wilmington—S. R. S. Distributors

NORTH DAKOTA
Fargo—Fargo Glass & Paint Co.

OHIO
Akron—The Sacks Electrical Supply Co.
Bridgeport—A. G. Dienstel Co.
Cincinnati—The Mutual Mfg. & Supply Co.
Cleveland—Midland Electric Co.
Columbus—F. O. Carpenter & Son
Dayton—Yonts Radio & Appliance Co.
Toledo—Loeffler Electric Co., Inc.

OKLAHOMA
Oklahoma City—Southwest Radio & Equipment Co.

PENNSYLVANIA
Allentown—Allen Electric Co., Inc.
Allentown—Joseph S. Karp & Brothers
Johnstown—Joseph S. Karp & Brothers
Harrisburg—Appleby Bros. & Whitaker Co.
Philadelphia—Factory Branch
Reading—Dries Hardware Store
Scranton—The Charles B. Scott Co.
Towanda—The Charles B. Scott Co.

RHODE ISLAND
Providence—Providence Electric Co., Inc.

SOUTH CAROLINA
Charleston—Home Appliance Co.
Columbia—Noland Co.
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TENNESSEE
Bristol—Furrow Electric Co.
Chattanooga—Noland Co.
Knoxville—A. C. Rochat
Memphis—McDonald Brothers
Nashville—Gambill Distributing Co.

TEXAS
Dallas—Norman-Young Appliance Co.
El Paso—Midland Specialty Co.
Fort Worth—The Shield Co.
San Antonio—Alamo Distributing Co.

UTAH
Salt Lake City—Stewart Distributing Co.

VIRGINIA
Lynchburg—Noland Co.
Newport News—Noland Co.
Norfolk—Noland Co.
Richmond—Noland Co.
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Yakima—Yakima Pump & Plumbing Co.

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Clarksburg—The Stout Co.
Huntington—Tri-State Appliance Co.

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Milwaukee—Clark Supply Co.

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Lima—Eguren, Echecopar & Cia, S. A.

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6-A

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"THERE'S NOTHING LIKE A COOL DRINK OF WATER"

Planning to Train Veterans 'On the Job'? Here's What You Should Know (Part 2)

By John Sweet

"What about this other training program, the one for disabled veterans?" you, the employer, might inquire. "Besides taking on veterans under the G. I. Bill of Rights, maybe I could also hire a few handicapped veterans."

Provisions for on-the-job training of disabled veterans are contained in Public Law No. 16. The purpose of this act is broader than that of the G. I. Bill, in that it aims not only at enabling the veteran to learn a trade but at restoring his employability "which has been lost by virtue of a handicap due to a disability incurred in or aggravated by service."

How to Get Approval

"If I want to employ disabled veterans, do I write to the appropriate state agency for approval, the same as under the G. I. Bill?" you ask.

No, you do not. This is one of the differences in the two programs.

Under the G. I. Bill, it is up to the company to take the initiative in seeking approval for training veterans. While it is true that a firm can ask

for approval under Public Law No. 16, it is more generally the Veterans Administration which does the contacting.

"You mean I would not have any dealings with a state agency in handling disabled veterans?" it might occur to you to inquire.

Right. Under Public Law 16, all arrangements are conducted between only the business establishment and the Veterans Administration.

"Then whom do I see or who sees me?"

Placement of disabled veterans in on-the-job training is handled by training officers of regional Veterans Administration offices. Each training officer usually works with one general type of business or industry, with which he is ordinarily familiar.

In Michigan, for example, arrangements for training of disabled veterans in refrigeration and air conditioning firms located in Detroit and its environs are made by a training officer who is assigned to electrical services. This officer (in the case mentioned, it is Kent B. Froehlich) contacts as many electrical service companies as possible to attempt to

interest them in the program. Naturally, he is anxious to have interested business men contact him.

"So if such a training officer does not see me, then I should contact him at the nearest regional office of the Veterans Administration?"

That is the proper way to enlist your establishment in training disabled veterans.

"What is necessary to get approval for my firm under this set up?"

The training officer will inspect your establishment and then either approve or disapprove it. His approval is all that is necessary.

"If my establishment is approved, what then?"

The next step is the signing of an agreement between you and the Veterans Administration.

"You mean," you suddenly interrupt, "that to train disabled veterans, I have to sign a contract?"

Don't be alarmed. What you and the Veterans Administration sign is just exactly what the document is called—an Agreement. It is specifically stated in this agreement that it "may be terminated by the establishment or by the Veterans Administration on fifteen (15) days notice."

Training Plan Required

"Under the G. I. Bill, a company must submit a training program. What about this plan?"

Yes, an individual training program is required for each veteran under this plan, too, and will be okayed by the training officer before a firm is granted approval.

In the agreement you sign with the Veterans Administration, it is explained that for each veteran you accept "there will be of record a detailed course of training to be known as the Individual Training Program prepared by the Veterans Administration in collaboration with the establishment, listing all the main subject headings which together constitute the chosen occupation, and

To assist employers who want to offer "on-the-job" training for war veterans the News has asked Veteran Administration officials to answer many pertinent questions confronting these prospective employees regarding the various regulations and procedures involved in putting these veterans to work.

The article in last week's issue dealt with the training program under the G.I. Bill of Rights. The accompanying article discusses vocational training of disabled war veterans, as provided in Public Law No. 16.

under each subject heading listing all of the smaller elements of information, job operations, skills or processes of the occupation into which that subject heading may be divided.

"These listings will be in such detail and in such form as to make feasible the ready posting of accomplishment data against such of the listed items as the veteran shall have worked on during any given period of time."

"Generally speaking, then, this training program will show the various stages a veteran must go through to be considered fully trained, and the approximate length of time this will take," you summarize.

Correct. The training officer will help you work out this outline, if you request assistance, and usually he has on file copies of other firms' training programs which you can use as a guide.

Following the Plan

"From my own experience, I know it would be difficult to follow a training program in the exact order it would be set up. Do I have to do this regardless of the effect it would have on my daily operations?"

Generally speaking, no. Mr. Froehlich, of the Detroit regional office, explained that "A training program doesn't have to be followed in any chronological order."

"When the veteran gets the various phases of the program," he said, "will depend on the flow of work through the shop or in the field. The employer is not held to any rigid program. We don't try to pin the employer down. We just want him to be honest with us."

"Besides requiring a training program, what else is in this agreement?"

The two parties further agree "that the establishment will train the veteran in each of the significant items of the Individual Training Program to the extent that at the

end of a period of time to be agreed upon before the beginning of training subject to such subsequent modifications as are mutually agreed upon as being necessary to the successful rehabilitation of the veteran, the veteran will be amply skilled in all of these significant items of work and will be satisfactorily employable in the chosen occupational objective."

"How is it determined when and if the veteran is successfully rehabilitated?" you may want to know.

This is decided by agreement between the company and the Veterans Administration. In order that all three parties—the firm, the Veterans Administration, and the veteran—can have an up-to-date, accurate picture of how successfully the veteran is progressing toward his objective of full employability, certain simple reports are necessary.

The employer's report is made monthly on a standard form (1905e) supplied by the Veterans Administration. This form has spaces for listing all training activities, dates, absences, tardiness, number of training items, how much completed, hours spent, and quality.

Progress of Veteran

General comments on the veteran's progress are asked for, such as: Is trainee doing good work? Is he slow? Any learning difficulties? Is he adjusted psychologically? Is his attitude cooperative? Is objective suitable? Is he making sufficient progress? Other problems?

Rehabilitation Form 1905f is used by the veteran to record his daily activities. Spaces are provided for showing training items worked on each day and the time spent.

At the bottom of the form are the questions: "What things in your training present difficulties? Are you satisfied with your progress?" He also must list training item numbers completed each week and the number of days absent and late.

A monthly report is also made by the training officer. He uses Form 1905g to make observations and recommendations pertaining to the following factors:

Absence. Lateness. Trainee's reports. Trainee's work poor. Trainee slow. Learning difficulties. Is trainee adjusted (gets along with others, etc.)? Trainee's attitude—cooperative, responsible. Is objective suitable—compatible with disability?

Too little progress—too long on one type of work. Achievement on tests or "grade" rating. Instructor's report. Course content adequate. Quality of instruction. Training conditions—hours, laboratory, noise, health affected. Equipment, tools, texts, job sheets, aid.

Is facility cooperative—is it proving to be a good one? Prospects for employment. Talked with trainee. Talked with instructor. Other problems.


After consideration of these items, the training officer gives an overall estimate of the veteran as excellent, very good, average, only fair, or poor.

"From this," you might suggest, "it would appear that the disabled veteran is supervised by the training officer in addition to the employer."

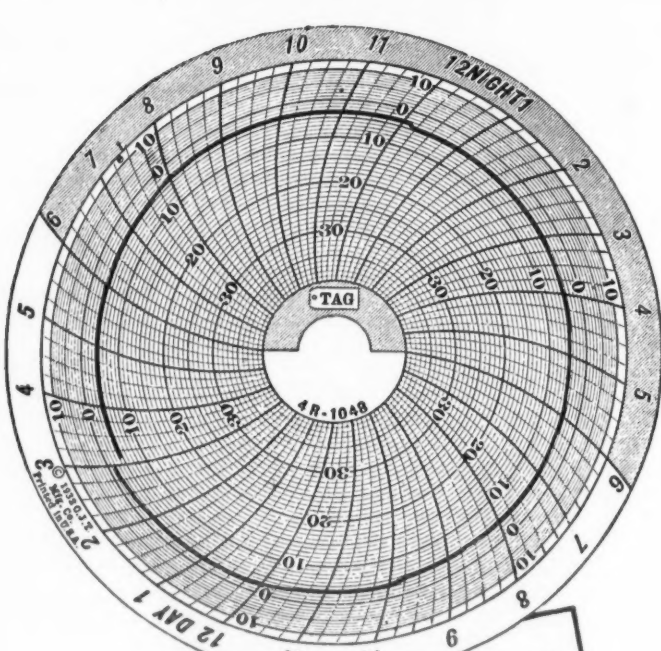
That's right. This is another of the present differences between the G. I. Bill and Public Law 16, although the advisability of supervising all veteran training-on-the-job is understood to be under consideration now by the Veterans Administration.

The training officer makes periodic personal checks with both the em-

(Concluded on next page)



by **KRAMER**



UNIFORM TEMPERATURE IN A SELF-DEFROSTING LOCKER ROOM

This is a 24 hour temperature record of a locker storage room of 500 locker capacity. Two compressors with two THERMOBANKS defrost independently at staggered time settings, giving minimum temperature fluctuations.

The contracting firm was the Refrigeration Corporation of America, 241 W. 64th Street, New York, N. Y.

WITH the THERMOBANK a zero degree system is just as automatic as a 40 degree system, in fact more so.

It never needs to be defrosted because it defrosts itself automatically without the use of brine sprays, water sprays or electric heaters.

Send for Bulletin T. V. 345

KRAMER TRENTON CO.

Trenton, New Jersey

DAVISON'S Refrigeration Grade Silica Gel



Because Davison's Refrigeration Grade Silica Gel meets, and on many points, exceeds the requirements of the complete drying agent, IT COMPLIES WITH THE REQUIREMENTS OF JOINT ARMY-NAVY SPECIFICATION JAN-D-169-GRADE A TYPE 11 FOR DESICCANTS (ACTIVATED)

...the drying agent with a background of success in moisture elimination

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TEMPRITE PRODUCTS CORPORATION

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Training Veterans--

(Concluded from preceding page)

ployer and the veteran. He tries to work out any training problems of the employer and helps correct maladjustments affecting the veteran.

"How much do I have to pay a disabled veteran?"

The wage plan for disabled veterans works substantially the same as for other discharged service men. The employer pays the same rates as he would to any beginner, and the Government supplements this with certain allowances.

What Is the Pay?

"I understand the Government makes up the difference between what I pay and the minimum wage for a qualified employee?"

This is an erroneous idea that many employers have. Just as under the G. I. Bill, the wage paid the veteran by his employer plus his Government allowance may equal but "cannot exceed the amount the employer is paying a qualified employee in the occupation in which the veteran is being trained."

Here is exactly how this works. Every qualified disabled veteran draws a certain per cent pension. The day he starts on-the-job training, his pension is increased and an allowance for dependents authorized. Under a revised schedule which went into effect Jan. 1, a single man's pension is boosted to \$105 a month and a married man's to \$115. In addition, a married man is allowed \$10 a month for the first dependent child, \$7 each for other dependent children, and \$15 for each dependent parent.

These allowances are the same regardless of the amount of the basic pension. They are continued as long as the veteran is in training and for two months after employability has been determined.

In addition to the allowances, a veteran may secure a loan, without interest, up to \$100 upon commencement of his training.

Depending on how much the employer pays him, the veteran may or may not make as much as a qualified employee. But, if the point is reached when the increase in pension plus what he makes on the job exceeds the entrance skilled wage, the pension increase is reduced in the amount of the excess.

In connection with wages, it is stipulated in the Agreement that "the establishment will report to the Veterans Administration each month the amount of such payment and that this report will be made under oath in accordance with the requirement of Public No. 16, 78th Congress, and as to those veterans to whom no such payment was made, the report will so indicate."

Veteran's Qualifications

"Now, what about the veteran's side of the plan. What qualifications does he have to have?"

Eligible veterans are those who meet the four following requirements:

1. That the person must have been in the active military or naval service on or after Sept. 16, 1940, and during the present war.

2. That he or she has been discharged or released from the active service under conditions other than dishonorable.

3. That he or she must have a disability incurred in or aggravated by such service for which pension is payable under laws administered by the Veterans Administration, or would be but for the receipt of retirement pay.

That he or she must be in need of vocational rehabilitation to overcome the handicap of such disability.

"So if a disabled veteran meets these requirements, what does he do if he wants to work for me?"

He should go to a Veterans Administration office to make application.

If he is found qualified, the veteran will first be turned over to the advice-ment section.

This section will spend from one to three days screening the veteran by means of interviews and various tests to determine what job is best for him. As the Veterans Administration explains it:

Choice of Trade

"The selection of an occupation in which rehabilitation will be effected is based upon consideration of the individual veteran's education, vocational experience, abilities, personal desires, and present disability, and contemplates that the vocational training to be provided will supply the necessary occupational information and develop the proper skills to afford the disabled person a well-rounded knowledge of and the ability to perform all of the skills, job operations, and work tasks which are essential to meeting employment in the chosen occupation."

On the basis of the interviews and tests, a "profile" or graph of the veteran's capabilities is drawn and put in a personal file, along with other results of the screening process. This file is turned over to the training officer handling the business for which it has been decided the veteran is best equipped.

This screening process works out very advantageously to the employer, according to Bruce M. Raymond, chief of the Training and Education Subdivision of the Michigan Vocational Rehabilitation and Education Division. The employer can be almost absolutely certain he is getting an employee who is interested in the job, has a known aptitude for it, and is medically and psychologically suited to it.

"In our experience with around 2,000 veterans, 90% of the assignments have turned out very, very successfully," Mr. Raymond declared.

Placement of the veteran is then made in one of the firms with which an agreement has been signed.

"Does the length of time the veteran can train with me depend on his length of service, as under the G. I. Bill?"

No, this is another difference. His period of training will be agreed upon at the outset by you and the Veterans Administration.

If the veteran should reach his ultimate objective before expiration of the formal training program and if the employer can give him no further training, he is declared rehabilitated. His increased pension continues for two months after completion of training, and, if necessary, the Veterans Administration attempts to find him a job in his field.

If the trainee arrives at the end of the designated training time without having become fully qualified and is considered a deserving case, the training period will be extended. However, no course of instruction can exceed four years and no training under this legislation can be afforded beyond nine years after termination of the war.

Tie-ins With Schools

"Can the disabled veteran take off-the-job courses at a local school?"

Yes, provided the courses are related to his training and provided the school has made the necessary contracts with the Veterans Administration. The Government will meet the cost of tuition, books, supplies, and other incidentals.

"What about the cost of equipment and supplies required in training on the job?"

These, too, are provided for the veteran.

"Is the regulation pertaining to injuries in this training the same as in the G. I. Bill?"

No. Public Law 16 provides that "An injury or an aggravation of an injury suffered while pursuing a course of vocational rehabilitation as the result of the pursuit of such course, and not the result of his or her own willful misconduct, and such injury or aggravation results in additional disability to or death of such person, the benefits under laws applicable to veterans of the (last) war shall be awarded in the same manner and extent as if such disability, aggravation, or death were service-connected . . . except that no benefits under this part shall be awarded unless application be made therefor within two years . . ."

"Can I discharge an unsuitable disabled veteran, the same as I can under the G. I. Bill?"

Yes. A part of your agreement with the Veterans Administration states that:

"It is further agreed that the veteran . . . will be under the control of the establishment and will be subject to such of the rules governing the conduct and work of employees as the establishment may see fit to apply, and that the Veterans Administration will remove from training . . . any veteran whose personal conduct, lack of application to his training or unsatisfactory quality of work is such as to jeopardize the best interests of the establishment or of the Veterans Administration . . ."

This section has the provision that "in the case of a veteran regularly

apprenticed under terms of an apprentice indenture approved by the State Apprenticeship Council, the terms of such indenture shall control insofar as such terms are not incompatible with the Federal law governing the veteran's training, or with the interests of the Veterans Administration, or with its policies."

"How successfully has this program been working out?" you might want to know, finally.

No statistics are available for the Detroit area with regard to placements in air conditioning and refrigeration firms, but it is the opinion of Mr. Froehlich that the companies he has been working with "seem to be very well satisfied."

"This is not a hit-or-miss program," he explained. "We try not to bother a company if we are not reasonably sure the veteran is a good man and that he will stay on the job."

Government's View

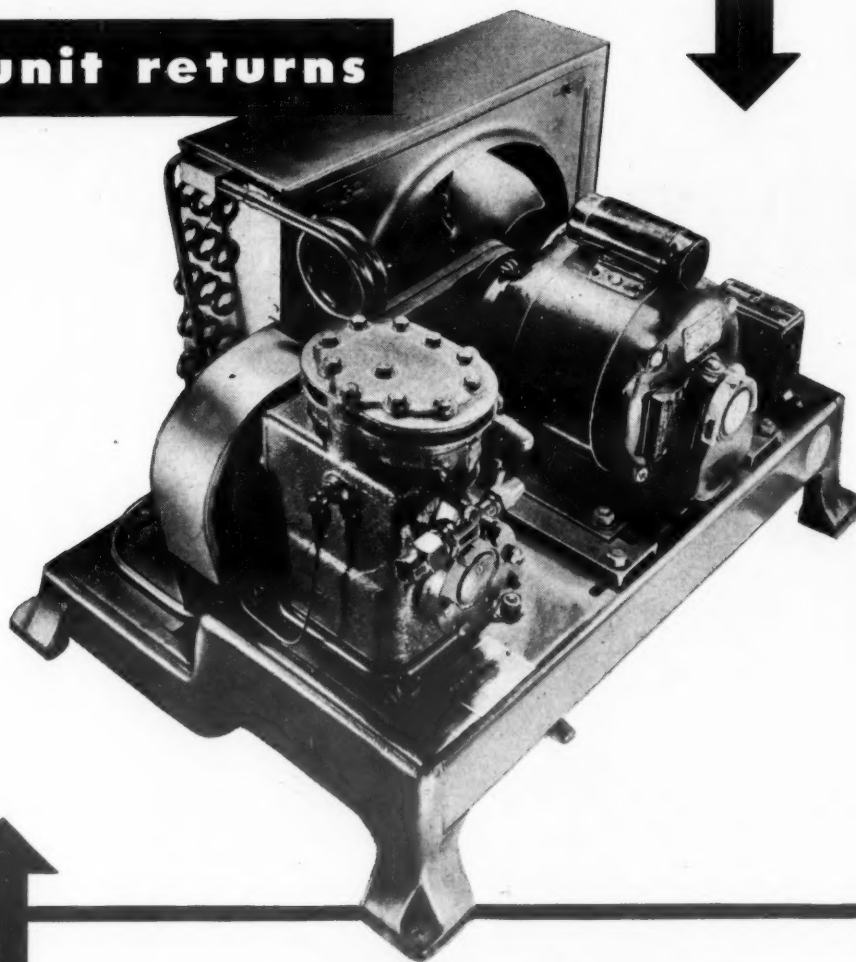
In explanation of the wage plan, he said the Government "doesn't want veterans, as beginners, competing with journeymen. On the other hand, we don't want that to interfere with the man getting raises from time to time from the company for what he is worth."

"We are definitely not providing cheap labor. We try to be fair and square with the company and look for cooperation to the fullest from both sides."

He said that very few veterans had dropped out of the program because of unfavorable progress. Most of those who have withdrawn have done so because their companies had no work for them, he declared.

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condensing unit returns



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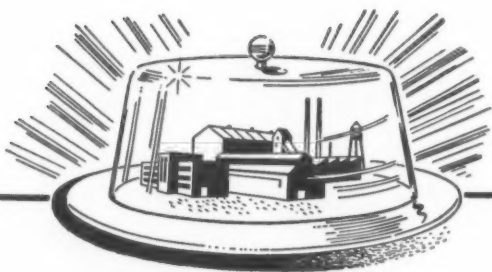
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There's Always Something To Be Thankful For

SETTLEMENT of the steel and electrical strikes means that hundreds of manufacturers, and thousands of distributors and dealers, can breathe easier.

At least, they have the assurance that the wheels of reconversion can start turning again.

Nevertheless, everybody must realize that it still will be quite awhile before Mrs. John Q. Public can walk into a dealer's store and get everything she wants. It will take time for the setback caused by the strikes to be overcome. And it will be many months before dealers can get their orders filled promptly.

Frustrating as this situation is now, and as it will remain for some time, it does have one consolation:

It will help keep the appliance business from being overcrowded with dealers.

Difficult it is for those who haven't been "on the inside" to realize how tremendous have been the unprecedented pressures placed on manufacturers and distributors for franchises.

Existing retailers of all kinds wanted to add appliance lines. Newly rich people from all walks of life have thought that this would be a good business in which to invest their restless cash.

And many returning G.I.'s—that great body of men fed up with regimentation and regulations who want to go into business for themselves—have seized upon the appliance dealership as being the answer to their dreams.

It hasn't been easy to resist these pressures. All sorts of wires have been pulled. The most persuasive, most plausible arguments have been put up by newcomers as to why they should be established as dealers.

Personal friends have "put on the heat." And so have people with financial and social "connections."

To the great credit of the industry, these pressures have been resisted sturdily.

Here and there one hears reports of distributors who have over-appointed retail outlets in their respective territories. But this hasn't happened on a national scale.

On the other side of the ledger, we have knowledge of many branches and distributorships which have actually reduced the number of their dealers. They have utilized their drivers'-seat position to strengthen their distribution organization by acquiring more of the best dealers, while weeding out the coattail hangers-on.

These "best" dealers have been wooed and won by promises of a cleaner, sounder distribution pattern in their area. Roughly translated, "cleaner and sounder" means *not cutting the pie into too many pieces.*

When you have too many dealers in a given area, ruinous price-cutting is the inevitable result. Shoppers go from dealer to dealer, playing one off against another. Result: nobody makes any money, no dealer has enthusiasm for pushing the product.

The shortage of merchandise has forced the limitation of dealers. It has also discouraged a lot of the fast operators who thought they saw in the appliance business a chance to make a quick clean-up and then get out.

So, much as it hurts now, maybe the situation is a blessing in disguise.

Home Freezer Can Give Housewife Fruits Above Average Commercial Run--Tressler

Food Expert Warns That Housewives Must Use Ripe, Properly-Treated Fruit For Best Results

NEW YORK CITY — Homemakers who have their own home freezers or rent locker plant space should be able to have frozen fruits that are better than the average run of commercial products, said Dr. Donald K. Tressler, pioneer in the science of food preservation and consultant to General Electric Co., in a talk before 65 food editors from all parts of the United States and Canada.

But, qualified Dr. Tressler, this will only be true under certain conditions. "Tips" on how to achieve those conditions were given as follows:

Frozen fruit must be treated from the minute it is selected to the instant it is put on the table in a way that long research has proven gives best results.

Tree or vine-ripened fruit should always be selected, thereby eliminating "shipped in" produce, and the fruit should be matured to the "soft ripe" stage, rather than the "firm ripe" stage, he recommended. Above all, nothing should be frozen that would not be enjoyed fresh.

Variety of fruit is also of prime importance, Dr. Tressler stated. High color and strong flavor are good guides for the homemaker to follow. Yellow peaches are more suitable than white, and experience has shown that of the yellow varieties, the J. H. Hale and Viceroy types are more desirable.

In regard to sweetening, he recommended Sweetose white syrup, a corn syrup that is sweeter than other such products and that is the only one of its sort available, providing it is used "as is" and not in pies or jellies. Sweetose is made by the A. E. Staley Mfg. Co.

In preparation to freezing, the food should be thoroughly washed, and large fruits like peaches and apples peeled and sliced before combining with the liquid made in the proportion of four parts of Sweetose and one part of cold water, suggested Dr. Tressler. One half cup of this liquid should be added to one and one-half cups of fruit, and then put into an airtight pint size container and sealed.

The ideal package for this purpose, he admitted, has yet to be perfected, though a fairly satisfactory kind is that consisting of a cellophane bag fitting into a cardboard box.

In his discussion of actual processing, Dr. Tressler said proper storage temperature, as much below 0° F. as possible, had more to do with determining the final taste and texture of the fruit than the degree at which the actual freezing takes place. For example, apples kept at -40° F. are delicious after a decade.

Thawing and serving of fruits was another important point in Dr. Tressler's discussion. Speed in thawing was recommended highly for best results. The frozen carton should be placed before an electric fan or floated in a pan of cold water. Pint packages thaw in about 45 minutes, he said.

Once the food is in the ready-to-eat stage, it should be served without delay, and it is desirable to use the whole quantity at one meal, if possible. However, Dr. Tressler suggested, left-overs can be kept for about 12 hours by transferring them to a glass jar, putting water-proof paper under the syrup, and storing them in the freezing compartment.

Dr. Tressler also mentioned several fruits that take kindly to freezing as a method of preservation, but are not commonly frozen. Among these are avocados, oranges, and fresh prunes.

Texas U. Develops New Shrimp Freezing Method

AUSTIN, Tex.—A new method of quick-freezing shrimp has been developed by the University of Texas bureau of engineering research at Austin. The units have been set up in the engine room of the Galveston Ice & Cold Storage Co. plant at Galveston, Tex., where the university research engineers, W. R. Woolrich and J. M. Lebeaux, conducted their experiments.

The machine employs a freezing solution developed at the university, freezes shrimp for packaging in less than six minutes where from two and one half to nine hours was previously required.

The unit is run by a small electric motor and consists principally of a horizontal tank, open on top at both ends and enclosed in the middle, a screw conveyor in the covered part of the tank, and refrigeration apparatus.

Shrimp are placed in the tank at one end, float on the surface of the freezing solution and are carried by the conveyor slowly through the liquid in the tank until they float out the other end.

Packing Co. Finishes 2 New Cold Storage Rooms

THE DALLES, Ore.—Construction of two new cold storage rooms is nearing completion at the plant of the Columbia Gorge Packing Co., at The Dalles, Ore., and new refrigerated trucks will be placed in service to expedite the company's plan to expand its meat products business with Portland hotels and restaurants and to cover a wider area in the mid-Columbia section and other points in eastern Oregon and Washington.

Acker Erects Locker Plant

LOS ANGELES—A new frozen food locker plant is being erected at 14520 South Western Ave., Gardena Park District, Los Angeles, for J. T. Acker, to provide 4,380 sq. ft. of floor space and to cost \$14,000.

Frozen Pies Introduced By New York Baker

NEW YORK CITY—With the introduction of a new line of frozen pies by the Paradise Baking Corp., housewives here are getting their first experience with frozen baked goods.

Hand made and processed on the premises of the Paradise company, former manufacturers of ready baked pies and cakes for restaurants and institutions, the frozen pies come on special, heat resisting paper plates ready for baking when defrosted. Each pie is large enough to serve four people, thereby convenient in size for storage in the refrigerator, it is reported.

The six flavors available are apple, mince, cherry, apricot, pineapple, and peach. The pastry is light and tender, says the article, and the fillings are equally good.

Retailing at 48 cents each, the pies are on sale now at the three Ultima Frozen Food Stores and the two Grand Food Products stores.

Two-Thirds of Housewives Are Planning Addition To Present Home Freezer Units, Report Shows

CLEVELAND — "Not only was every housewife interviewed enthusiastic about her home freezer, but two out of three are going to get a larger model when one becomes available, or buy a second freezer to have in their homes."

Such was the gist of a report submitted recently to the Cleveland Electric Illuminating Co. by one of its home service representatives. Returns from other field workers in the department verified a favorable reaction in their own territories.

The interviews were made in the course of regular field work during September-December, and the reports included talks with owners of 64 home freezers. Average age of the freezers was 2.4 years.

Enthusiastic comments by the housewives covered their freezers' ease of use, the superior flavor of foods that had been preserved, the year-round variety it made possible, and economy of operation and stor-

age space. The most colorful of the endorsements ran like this:

"I don't think we ever enjoyed a Christmas dinner more than last year—spring fried chicken and everything that goes with it. You should have heard the oh's and ah's when I served the strawberry shortcake with whipped cream, topped by an extra large berry frozen with the stem left on."

A chart compiled by J. E. North, general sales manager of the company, showed how seldom food losses had occurred in residential consumers' freezers and refrigerators:

	Freezers	Refrigerators
Total number of reports	64	2,491
Total years units owned	154	18,646
Average	2.4	7.4
Electrical failures	0	132
Mechanical failures	6	391
Value of food lost	\$45.00	\$845.90
Value per unit	.703	.339
Value per unit per year	.292	.045



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Refrigeration Problems And Their Solution

By P. B. Reed

For Service and Installation Engineers



Manager, Refrigeration
and Air Conditioning
Division, Perfex Corp.

The Capillary Tube (Part 2)

BALANCED REFRIGERANT CHARGE

The amount of refrigerant passed into the evaporator depends on the restrictive effect of the capillary tube, the difference in pressure across the capillary, the rate of refrigerant flow, amount of oil in the liquid, and type of refrigerant.

During operation, some surplus liquid refrigerant in the condenser does not greatly affect the activity of the evaporator unless the size of the condenser is such that the excess liquid is enough to reduce the effective surface of the condenser and thus increase the discharge pressure and the pressure difference across the capillary tubing.

Since all of the liquid in the condenser and liquid line passes into the evaporator during the idle cycle a "balanced charge" should be maintained, that is, there should be only just enough refrigerant in the system that solid liquid is fed to the capillary tube at all times when the condensing unit is running. If there is some excess liquid refrigerant in the condenser, it will flow into the evaporator after the unit stops and, since there will be an excess there also, it may "slug" back to the com-

pressor at the start of the running cycle and thereby damage the compressor.

In practice a completely "balanced" charge is not maintained, as the amount of refrigerant circulated varies with evaporator temperature, discharge pressure, and other conditions.

To compensate for this tendency toward frosting out on the suction line under varying conditions, and to prevent the possibility of "slugging" at the start of the running cycle an "accumulator" is provided. This is a small cylinder at the outlet end of the evaporator that will hold a small amount of refrigerant and thus takes up the surplus that may be in the evaporator due to the necessity of having a total amount of refrigerant in the system somewhat greater than is necessary for minimum conditions.

STOP VALVE TO PREVENT PRESSURE EQUALIZATION

Under certain conditions a solenoid valve may be used in the liquid line just ahead of the capillary tube so as to abruptly stop the flow of refrigerant into the evaporator. This may be actuated by the same pressure control or temperature control that starts and stops the condensing unit motor.

Unless a solenoid valve or other device is used to close the liquid line at the end of the running cycle, a temperature control must be used with a capillary tube system for the equalization of pressure prevents the use of a low pressure control.

CAPILLARY TUBE SYSTEM APPLICATIONS

The operating characteristics of a capillary tube makes it particularly applicable to the comparatively small, self-contained, factory assembled system in which the length of the capillary tube has been determined by experiment for the specific capacity of the condensing unit and evaporator and the temperature and load requirements of the equipment.

REFRIGERANTS USED

The capillary tube is usually used with systems employing one of the "Freons" as the refrigerant, but it is also applicable to the use of other low pressure refrigerants, such as methyl chloride, although, of course, the length of capillary tubing required will be different on account of the difference in the amount of liquid refrigerant circulated, and in the viscosity, density, etc., of the liquid.

The capillary tube is not suitable for remotely installed equipment in which the condensing unit and evaporator have not been "matched" to one another by experiment to determine the correct length of capillary. For such installations, especially if there is more than one evaporator on the same condensing unit, the thermostatic expansion valve is more suitable.

MUST AVOID DIRT OR MOISTURE

The two chief enemies of capillary tubes are dirt and moisture. Small specks of dirt that would be washed off the seat of an orifice may form a serious stoppage in the small inner diameter of a capillary tube, and is not readily dislodged, for it must travel several feet through the capillary.

Moisture forms into ice as the pressure drops as the liquid passes through the capillary and it takes but a very small amount of ice inside a capillary tube to entirely stop it and prevent the further passage of refrigerant. Refrigeration stops and the evaporator starts to defrost.

ICE STOPPAGE IN CAPILLARY MAY CLEAR ITSELF TEMPORARILY

If the stoppage in the capillary is due to moisture, refrigeration may resume when the evaporator and capillary become defrosted and the ice in the capillary melts. If the stoppage is due to dirt or other foreign matter, the stoppage will persist even when defrosting occurs.

DIRT MUST BE BLOWN OUT

Dirt, or other foreign matter, or sometimes ice, in the capillary, may (Concluded on next page)

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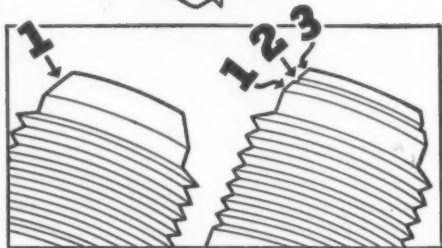


This groove in Imperial Triple-Seal Flare Fittings brings you triple-seal tightness in every joint... an extra protection against leakage.

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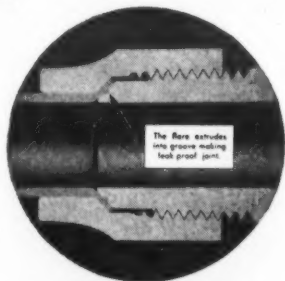
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(Left) Ordinary flare fittings have only one seal.

(Right) IMPERIAL TRIPLE-SEAL FLARE FITTINGS have three seals to give you new, extra protection against leakage.



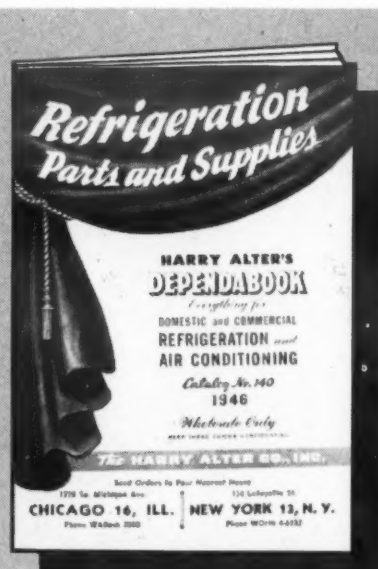
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Capillary Tubes--

(Concluded from preceding page)

sometimes be dislodged and driven back into the liquid line by heating the evaporator (with a hot towel or electric reflective heater). The pressure rise in the evaporator may drive the dirt or moisture plug back out of the capillary.

The capillary tubing may be stopped by lint or gums washed out of the motor insulation of hermetically sealed units. An improperly selected oil may congeal in the capillary tubing or may form sludges, especially in the presence of reagents mistakenly used to counteract moisture, acidity conditions, etc.

CLEANLINESS AND DRYNESS

Capillary tube systems must, therefore, be originally clean and dry. The manufacturers of the condensing unit and the evaporator, must use utmost care to remove all dirt, not only surface dirt, but dirt, sand, or metal grindings or lappings in the pores of the metal.

The hydrocarbon refrigerants including the "Freons," methyl chloride, methylene chloride, etc., are especially good solvents and will wash out these particles of foreign matter that have defied removal by ordinary washing by naphtha or even hot steam.

The hermetic unit manufacturer must use special methods to remove the moisture in the motor insulation to prevent its getting to the capillary tube after the system is put into operation.

SPECIAL FACILITIES FOR REMOVING DIRT, MOISTURE

The manufacturers employ very careful expensive methods to originally cleanse and dry the equipment, methods that are not available to service engineers in the field, or even in their own shops. This is an additional reason why the capillary tube particularly lends itself to a completely factory built system, in the construction and assembly of which factory facilities are used for extreme cleanliness.

USE OF FILTER AND DEHYDRATOR DESIRABLE

To guard against any dirt or moisture entering the capillary tube, a filter and dehydrator should be used immediately ahead of the capillary tube. The filter should include a strainer of not larger than 80 mesh and if possible a felt pad or similar material adequately secured to prevent any of its fibers getting into the capillary.

A small dehydrator of silica-gel should also be used to insure the removal of any stray moisture anywhere in the system that may find its way to the capillary tube. Silica-gel has much greater moisture adsorbing quality when cold than when warm, so the dehydrator should be placed near the capillary tube or evaporator where it will be cooled by conduction. One manufacturer places the dehydrator between the capillary tube and the evaporator so as to obtain the maximum adsorbent ability of the Silica-gel.

USE UTMOST CARE IN FIELD REPAIR

In the event that the service engineer finds it necessary to open a system using a capillary tube, he should use utmost care to keep the parts that he works on clean and dry, to use only approved oil, refrigerant, or other materials, to prevent the entrance of moisture, dirt, or any other foreign matter into the system.

If the system is equipped with a dehydrator he should refill it with a new dry charge of Silica-gel. If not equipped with a strainer or dehydrator he should, after opening a capillary tube system, install one each of these devices when he reassembles the parts and puts the equipment back into operation.

With Frigidaire



GEORGE H. POGGEN, JR.

Poggen Heads Frigidaire Detroit Commercial Sales

DETROIT—George H. Poggen, Jr., who has been associated with McCord Corp. for several years, has been appointed Frigidaire commercial and air conditioning manager for the Michigan area, announces J. H. Moloney, general sales manager of Frigidaire Sales Corp.'s Detroit branch.

During the past 10 years Mr. Poggen devoted most of his time to sales and engineering of McCord's line of refrigeration products. An active member of the American Society of Refrigerating Engineers, he is currently vice chairman of the Detroit section.

Joe Parker to Represent Highside Chemicals

NEWARK, N. J.—Joe E. Parker, manufacturers' agent with headquarters in Atlanta, has been appointed sales representative for Highside Chemicals Co. for the seven states comprising the southeastern district, reports Laurence V. Gardner, general manager of the company.

Mr. Parker will contact manufacturers and refrigeration supply wholesalers in connection with "Thawzone" and "Trace," Highside's two products for the refrigeration trade.

10 New Distributors Named by Iceberg

NEW YORK CITY—Ten new distributors have been appointed for Iceberg frozen food storage units, the company announces.

Locations of the new distributors are:

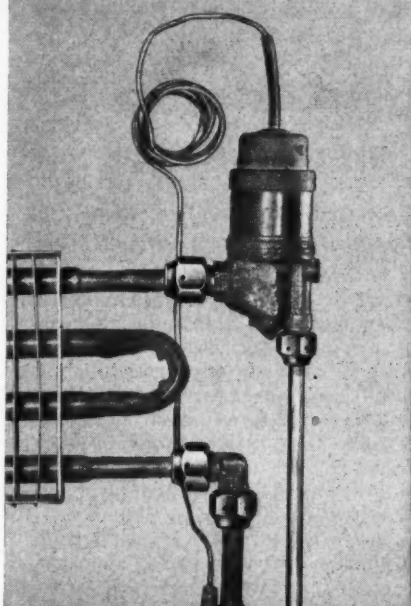
Reines-Freeman Distributors, Albany, N. Y.; R. M. Flagg Co., Bangor, Me.; 20th Century Refrigeration Co., Cincinnati; W. B. Haines Food Machines, Dayton; Bandoli-McIntyre Co., Los Angeles; Seneca Corp., Philadelphia; Motor Power Equipment Co., St. Paul, Minn.; Toledo Merchandise Co., Toledo; W. T. Shackelford Co., Atlanta; Alford's Supplies, Albuquerque, N. M.

Wilshire Refrigeration Co. Is New Los Angeles Firm

LOS ANGELES—Wilshire Refrigeration Co. is the firm name under which Seth A. Dinwiddie and William Weiss have published a certificate that they are conducting a refrigeration business at 633 South Western Ave., Los Angeles.

STA-TITE

THE REFRIGERATION FLARE NUT which cannot Creep or Work loose



Moisture will work its way along the threads, to fill the space between the fitting and the inside of the flare nut. Confined in this space, the water, in its attempt to freeze during the operating cycle, develops a tremendous pressure—16,400 p.s.i. at 20° F. Something has to give at such high pressures . . . (1) the nut may stretch; (2) the male fitting may collapse; (3) the copper tube flare may extrude . . . any one of which will allow the flare nut to loosen. You know the rest—moisture in the system and/or loss of refrigerant. A condition which has long baffled the refrigeration industry.

NOW—Superior engineers have found a positive cure—the new "STA-TITE" Flare Nut. By simply providing relief openings in otherwise standard flare nuts, the possibility of pressure being created is entirely eliminated . . . the flare nut stays tight!

Thousands of "STA-TITE" Flare Nuts already in service have yet to show a single failure. Moisture trouble, costly and annoying leaks, because of so-called "creeping" flare nuts, have been eliminated completely.

Get "STA-TITE" Flare Nuts from your jobber. Use them on all connections which are subject to frequent or occasional frosting and defrosting. Banish "creeping" and leaks forever!

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*U.S. Patent 2,323,099

NO. 134



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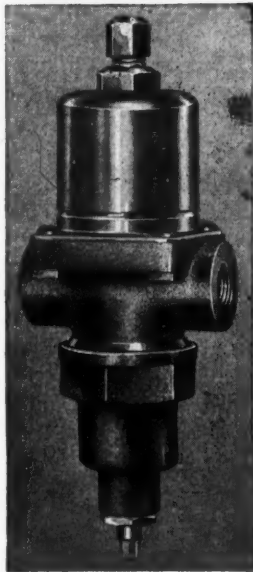
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For more details see Bulletin No. 15.

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Write for descriptive Bulletin No. 91

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How Air Diffuser Units Should be Installed To Gain Benefits of 'Draftless' Design

Typical Factory Job Illustrates Principle

By George R. Wallen, Consulting
Engineer, Anemostat Corp. of America

According to the latest statistics, common colds are responsible for more than one third of the number of days lost in American factories. And a two-year study of cold in air conditioned plants, recently published by the American Medical Association, reveals that while there are fewer colds in air conditioned plants, there is still a high incidence of colds in drafty sections of the plants.

These factors are contributing to the wide and increasing adoption of so-called draftless air diffusers by industrial plants air conditioned for comfort purposes.

Notwithstanding the importance of draft elimination to the success of comfort conditioning, the proper selection and installation of air diffusers are as yet not too well understood by the men who sell, install, and service engineered-on-the-job systems.

If even the best industrial plant air conditioning system is to be a comfort instead of a nuisance, the conditioned air must be diffused by these devices in such a way as to equalize temperatures, prevent the formation of dead air pockets, and eliminate drafts throughout the occupancy area.

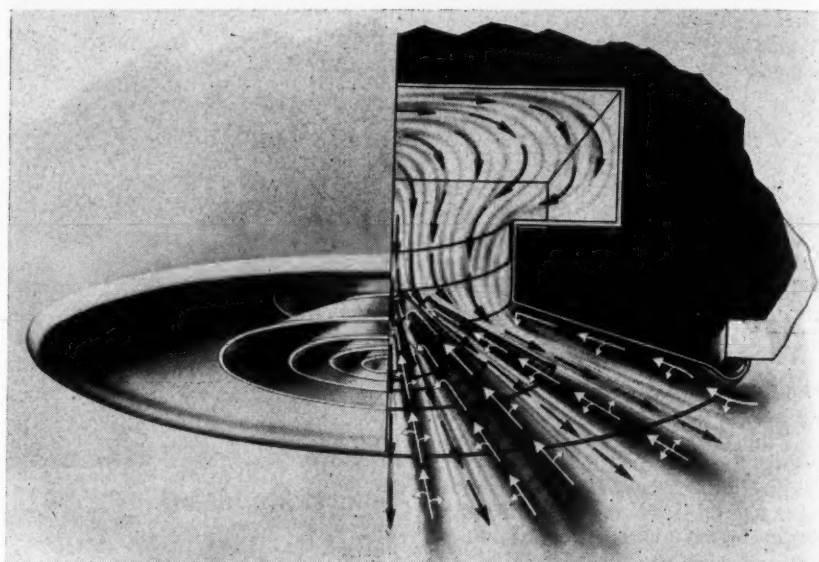
DEVELOPMENT OF THE AIR DIFFUSER

The role played by air diffusers in present-day comfort conditioning of industrial plants can be most easily understood by briefly looking back on the early attempts to eliminate drafts that led to the development and present extensive use of the air diffuser.

The design of registers or grilles on air conditioning duct outlets was originally based solely on appearance and the size necessary to pass the volume of air required for heating. Drafts were not so readily produced by air heating equipment since heated air floats upward again after losing its original velocity.

With the introduction of factory cooling, however, the heavier cooled air fell upon workers so quickly that the mixing of the incoming cooled air with the warm air of the plant took place in the occupancy zone, instead of in the ceiling area above it. Workers caught in the middle of this mixing action naturally experienced severe drafts.

To prevent this cold air from directly contacting workers, air conditioning engineers tried introducing only slightly cooled air in greater volumes. But the increased volumes of slightly cooled air created more drafts, due to the unavoidable greater volume and faster air movement.



This cross-section of the Anemostat air diffuser shows how the design of the outlet mixes the conditioned air (black arrows) with recirculated air (white arrows) in the factory space. The counter-currents account for about 35% of the incoming air.

Moreover, the greater volume of slightly cooled air demanded the use of higher fan power. And other attempts to eliminate drafts produced even more drafts from other sources.

First attempts to design an air diffusing device culminated in the pan-type duct outlet. This was nothing more than a hole cut in the ceiling at the duct, with a simple pan or plaque below it to hide the hole. The pan also acted as a crude baffle to the cold air currents which otherwise dropped directly to the floor below.

PERFORMANCE AFFECTED BY CEILING CONSTRUCTION

The performance of this pan-type of outlet is affected by the ceiling construction and cannot be predicted. The air is discharged in only a single horizontal plane from the pan. Under such circumstances, the entering air is difficult to control and must be supplied at a temperature close to that of the air in the plant. There is only a limited mixture with the plant air, and an unequal distribution of the air within the plant.

Constant research in the field of air distribution finally revealed that the one thing required to eliminate drafts from air conditioning systems was an air diffuser which would thoroughly pre-mix the incoming air with the plant air well above the occupancy zone. In other words, an air diffuser was needed which would actually pre-mix the incoming air and a substantial portion of the factory air within the diffuser itself.

One phase of research and experiment in the design of air diffusers resulted in a patented device known as the Anemostat air diffuser.

This name is from the Greek—"Anemo" for air flow, and "Stat" for control or regulator. So we interpret Anemostat as a combined air pre-mixer and air diffusion control for the purpose of introducing cooled or heated air without discomfort to anyone in the plant.

WHAT THIS AIR DIFFUSER DOES TO CONDITIONED AIR

The operating principle of the Anemostat air diffuser can be easily understood by following the progress of conditioned air as it passes from an air duct through the device.

When air of any duct velocity reaches the device, it passes through a series of flaring metal cones, fixed one inside the other (see the accompanying air flow cross-section of the Anemostat).

The velocity of the incoming air is instantly reduced by expansion of the air within these flaring cones. This air expansion converts the velocity

energy of the air into a blanket pressure on the factory air beneath the diffuser.

The design of the metal cones is such that the passage of incoming air through them also siphons a series of counter-currents of factory air back into certain of the cones (see air flow arrows in cross section). Two cones act as suppliers only.

AIR IS PRE-MIXED

These multiple counter-currents carry plant air equal to about 35% of the incoming air into the diffuser, where it is mixed with the incoming air stream before the mixture is discharged from the diffuser.

Thus, air passing through this diffuser is pre-mixed with the siphoned factory air and distributed as a blanket pressure on the factory air below. The series of cones forming the Anemostat thus discharge definite proportions of air into the plant in all directions in a continuous blanket.

This low velocity air diffusion, together with the air mixing action within the device, eliminates drafts, temperature and humidity are equalized throughout the plant, the formation of stale air pockets is definitely prevented, and evaporation auras around human bodies are broken up. Thus the health of the worker is safeguarded, his comfort assured, and his efficiency increased.

MIXING OCCURS ABOVE LEVEL OF WORKERS

Since this air diffuser mixes the incoming air with the plant air within—and in the immediate area of—the device itself, the desired plant temperature is established at a point well above the occupancy level of the workers. This permits the use of colder incoming air—or warmer in the case of heating—than would otherwise be possible.

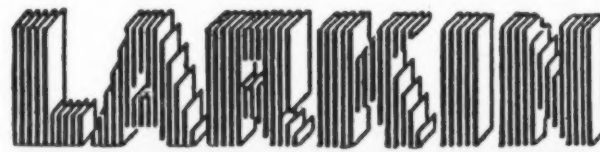
And this, in turn, results in smaller volumes of air to be conditioned, permitting use of smaller fans and smaller air ducts.

In addition, the high air velocities which may be employed, because of the draft-free air diffusion, result in still further reductions in duct sizes and simplification of duct layouts.

Rather than to attempt a condensed discussion of several of these air diffuser installations, a single one will be described in detail: the air diffuser installation in Building No. 41 of the International Business Machines Corp., at Endicott, N. Y.

This building is completely air conditioned by a system comprising 51 separate zones. Each zone has its own air conditioning unit, operated

(Concluded on next page)



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Bare Tube Coils

Ceiling Units Employed In Drafting Room



To distribute air in the drafting room of the International Business Machines plant, ceiling-type Anemostats were used.

180 Diffusers Employed to Distribute High Velocity Air In Factory Building

(Concluded from preceding page)

and controlled independently of any other unit.

The units are supplied chilled water from a central refrigeration plant consisting of a turbine-driven centrifugal compressor providing 680 tons of refrigeration capacity. This is supplemented by 52° F. well water which brings the total refrigeration capacity to roughly 945 tons.

Though this two-story building is constructed of reinforced concrete, there is a large heat loss because of the windows, and the saw-tooth ceiling construction. It is therefore necessary to circulate 400,000 c.f.m. through this building.

One hundred and eighty air diffusers are used to distribute this volume of high velocity air uniformly and without drafts. The air velocities employed in handling the various volumes of air vary from 900 to 1,500 f.p.m. for the ceiling Anemostat air diffusers. The neck velocities of the wall-type diffusers installed under the saw-tooth roof vary between 1,000 and 1,200 f.p.m.

When the installation was finished, velocity readings taken at the breathing level in occupied zones did not exceed 40 f.p.m.

On the second floor, occupied by milling, drilling, tool making, and special production departments, 72 wall-type air diffusers circulate 150,000 c.f.m. without a draft.

Eighteen air conditioning units are situated in narrow corridors or passages which run along either side of the building at the roof level. (These corridors serve also as distribution passages for steam lines, water lines, and non-insulated air conditioning ducts.) Air from the units is distributed to ducts which run across the building below the glass blocks in the sawtooth roof as shown in one of the photos.

Each of the 18 bays in the second floor has four wall-type Anemostat air diffusers to assure equalized dis-

tribution of the cooled air coming in at differentials up to 15° F. The first and second floors, with the basement, provide a total working area of 164,000 sq. ft. Except for the second floor, conditioned air throughout the building is distributed through the ceiling-type Anemostat air diffusers.

Whenever the working areas are occupied, a constant quantity of air, usually about 10 complete air changes per hour, is circulated continuously. However, during the winter night periods, holidays, and weekends, a thermostat operates the fan motor only when heat is needed. Under these conditions, the condensers and compressors do not function and the rest of the air conditioning units operate as heat circulating units only. Savings in steam and power result from this method of operation.

Pneumatically operated controls regulate temperature and humidity. The air diffusers keep the desired temperature and humidity uniformly distributed, or equalized, throughout the conditioned areas. In addition, the effects of any delayed action of the thermostatic controls are not so noticeable with well diffused air. And absence of drafts, and any over-cooled or under-cooled spots, keep the controls more steady and free from erratic operation.

In summer whenever the outside temperature is below 85° F., an inside temperature of 75° F. and a relative humidity of 53% is maintained throughout all portions of the building. When the outside temperature is above 85° F., a 10° F. differential is automatically maintained.

In the winter a temperature of 72° F. and 45% relative humidity is maintained. Whenever winter conditions are such that a relative humidity of 45% cannot be held, the greatest relative humidity that can exist without causing condensation is automatically maintained by the control instruments.

Dowling Will Represent Williams In New York

BLOOMINGTON, Ill.—S. J. Dowling has been appointed district representative for Oil-O-Matic in New York according to an announcement by W. A. Matheson, vice president in charge of the Williams Oil-O-Matic Division, Eureka Williams Corp.

Before joining Eureka Williams, Mr. Dowling served 10 years as general manager for the Public Service Engineering & Heating Co., distributor of Socony Fuel Oil and Delco oil burners in Bronx County, N. Y. He was also formerly associated with a New York City contractor and worked on most large buildings in the city, including the Chrysler Bldg. and the Park Central hotel.

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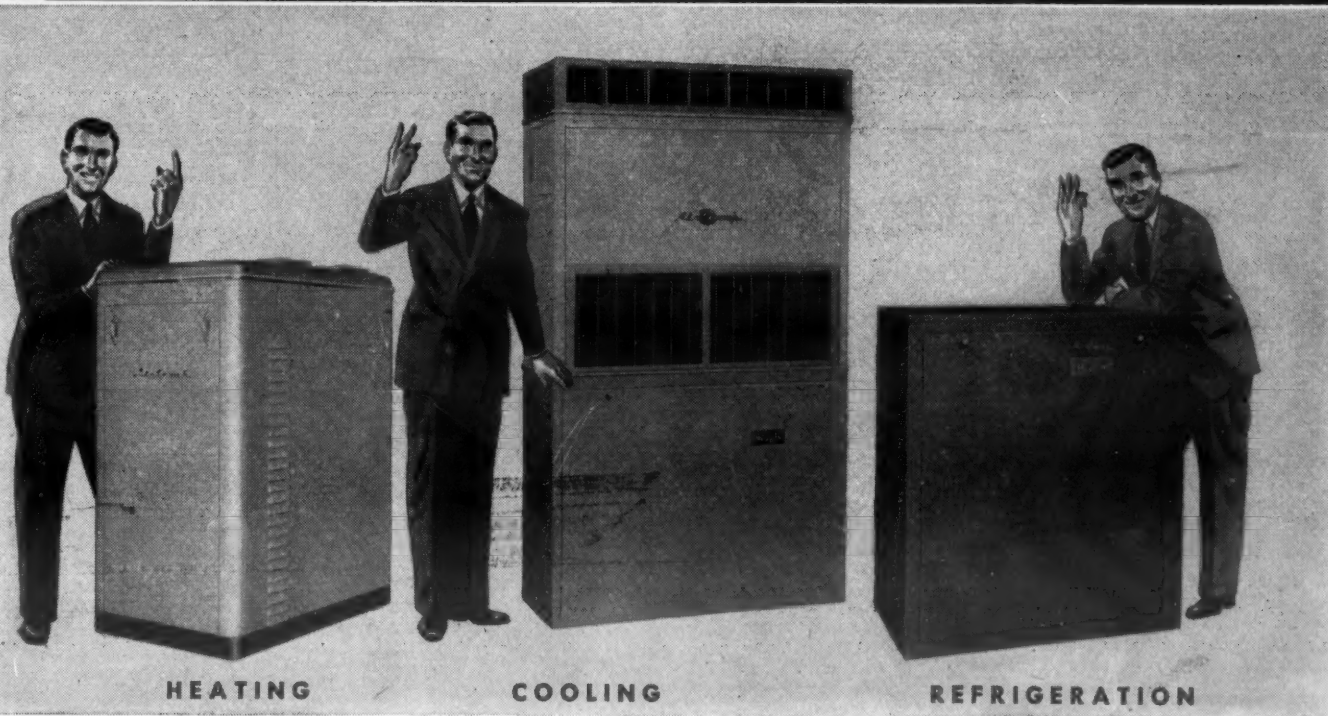


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engineering and mass production experience of Chrysler Corporation. As a result, prices are right and the advanced products have unusual public acceptance.

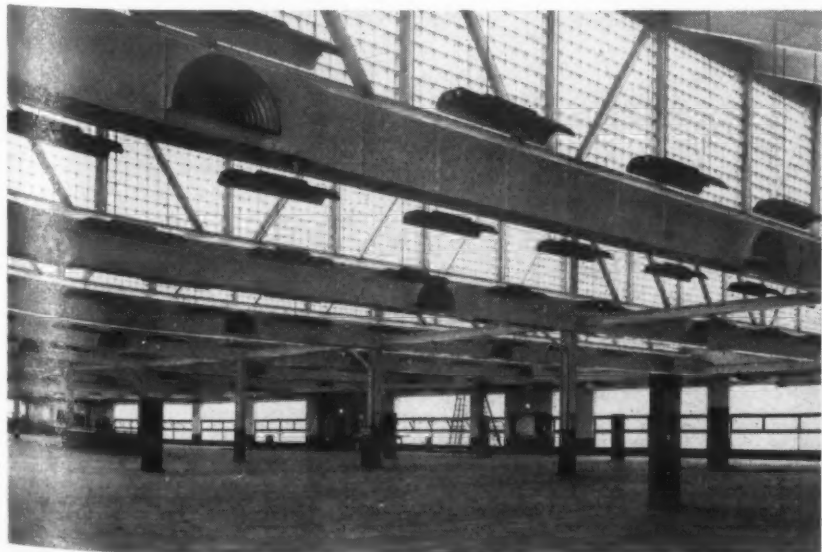
Don't make any commitments until you have investigated the profit possibilities of the triple line—automatic central home heating, "Packaged" Air Conditioners, and commercial and industrial refrigeration. For details write Airtemp Division of Chrysler Corp., Dayton 1, Ohio. In Canada—Therm-O-Rite Products, Ltd., Toronto, Ont.

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A I R C O N D I T I O N I N G
HEATING • COOLING • REFRIGERATION

How Air Is Ducted and Admitted to Factory



The sawtooth roof on the second floor of the International Business Machines plant presented a difficult air-distribution problem, which was solved by the duct arrangement shown here, which incorporates semi-circular wall-type Anemostats.

Commercial Dealers In St. Louis Form Group; Close Is President

ST. LOUIS—A Commercial Refrigerator Dealers Association of St. Louis has been formed here recently, with Thomas H. Close, president of Hussmann Refrigeration, Inc., elected as president of the organization.

Charles A. Kohl, of St. Louis Butchers' Supply Co., has been appointed vice president; Henry A. Weis, Jr., of Henry A. Weis, Jr. Co., is secretary and treasurer; Ralph Rudman, of R. & R. Equipment & Mfg. Co., is chairman of the membership committee; Robert Barbee, of McCray Refrigerator Co., is chair-

man of the trade-in committee; and Jack Marquis, of C. V. Hill Co., is chairman of the policy committee.

Three of the largest distributors of national accounts in the St. Louis area have already submitted applications to the association. Meetings will be held on the last Wednesday of each month at 12 o'clock noon.

Sterling to Process Metals For Refrigeration Units

LINCOLN, Neb. — The Sterling Mfg. Co. of Omaha has filed articles of incorporation with capital stock of \$250,000, to engage in processing of metals for refrigerating, air conditioning, heating, and other appliances. Incorporators are Charles E. Stenicka, Jr., and Erwin J. Grafentin.

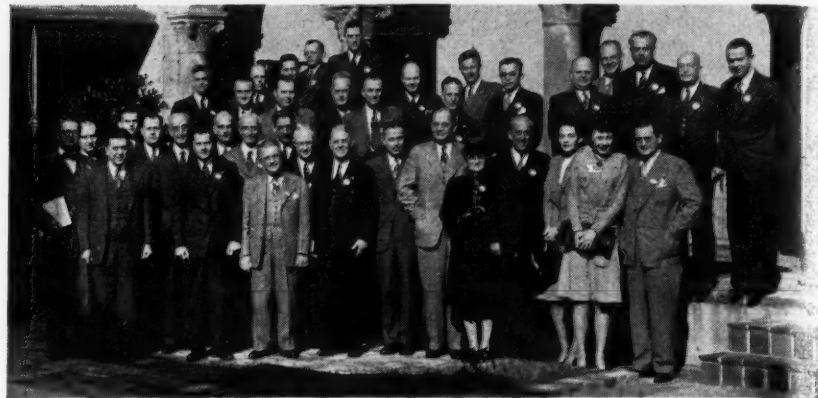
Vilter Appoints Vogel Asst. to President

MILWAUKEE — Albert O. Vogel, former lieutenant commander in the Naval Reserve, has returned after a leave-of-absence of 40 months to the Vilter Mfg. Co. here and has been appointed assistant to the president, it was announced by E. B. Tilton, president and general manager.

Prior to his Navy career, Mr. Vogel traveled to England, Germany, Switzerland, Spain, and South America doing contact work among Vilter's distributors there.

A graduate of Cornell university, he is a member of A.S.R.E. While in the Navy, Mr. Vogel was an officer-in-charge of inspection administration at a large local concern.

Virginia Smelting Announces New Insecticide At Company's First Postwar Sales Conference



During the recent sales meeting conducted at West Norfolk, Va., by Virginia Smelting Co., executives and district sales representatives paused between sessions for this photograph.

WEST NORFOLK, Va. — Lethal-aire, a new insecticide expected to become a major item in the Virginia Smelting Co.'s line of refrigerants and chemicals, was the highlight of the company's first postwar sales conference held here recently. Designed for industrial and commercial users, the aerosol insecticide has already been started in production, company officials said.

Among other highlights of the three-day conference was a review of the 1945 record and a projection of plans for the coming year. District representatives of the company, key branch office personnel, and others spent one day touring the Virginia home plant here.

Participants in the Norfolk program included: A. H. Eustis, president; C. W. Johnston, vice president; F. A. Eustis, secretary-treasurer; Robert LeBaron, director of research

and development; A. K. Scribner, general manager; Rollin H. Israel, manager of refrigeration sales and director of advertising; C. F. Bingham, manager of industrial sales; L. J. Hitch, manager of export sales; W. J. Taylor, comptroller; H. B. Chanson, director of technical service.

District representatives who attended were: Charles Throm, vice president, Commercial Chemicals, Inc., Buffalo; Bob Kane, manager, Innis-Speiden & Co., Cleveland; Howard Wunder, manager, Innis-Speiden & Co., Cincinnati; E. V. Danbar, Atlanta; Barney Arbuckle, Houston, Tex.; Ace Barber, Delavan Engineering Co., Des Moines, Iowa; Robert Chambers, Denver; Carl Miller, Seattle; William Dever, Detroit; Jack Eldridge and George Anderson, New York City; Fred Binns and Robert Malcolm, Boston; and Marshall Price, Chicago.

Hotels Earmark \$100 Million for Refrigerators, Freezers, and Air Conditioning Installations

NEW YORK CITY—Of the one and one-half billion dollars that is required to rehabilitate, re-equip, and modernize the country's hotels, nearly \$25 million will be allotted to the purchase of refrigerators and freezers, it was indicated in a survey of 12,868 hotels conducted by the American Hotel Association's National Membership Division here.

Air conditioning expenditures are estimated at \$76,203,765 as a result of the N.H.A. survey. This means in some instances the addition of air conditioning and in others the enlarging and re-equipping of systems already in operation.

Refrigerators will be purchased to the tune of \$18,943,344, while the number or freezers required will cost \$5,997,787, the survey indicates.

Ice cubers will absorb \$2,669,933 of the hotel improvement layout with hotels having 300 rooms or more spending \$575,970; 100 to 299 rooms,

\$833,980; 50 to 99 rooms, \$654,608; and under 50 rooms, \$605,375.

Hotels with 300 rooms or over will require \$42,849,801 in air conditioning equipment; 100 to 299 room establishments, \$20,991,180; 50 to 99 room establishments, \$9,108,288; and under 50 room establishments, \$3,254,496.

New public rooms, such as bars, cocktail lounges, and ballrooms will account for \$115,996,068 of hotel improvement expenditures, it was further learned. Biggest percentage of this will be for hotels having 100 to 299 rooms.

A.H.A. estimates that about one third of the one and one-half billion dollars earmarked for improvements by hotels throughout the country will be spent for deferred repairs and maintenance as a result of the all-time high wartime occupancy level.

Breakdown according to size of hotels shows the following totals:

Number of rooms	300 and over	100-299	50-99	Under 50
Freezers	\$ 829,239	\$1,877,260	\$1,702,784	\$1,588,504
Refrigerators, etc.	9,217,098	4,656,120	3,859,376	1,210,750
Totals	10,046,337	6,533,280	5,562,160	2,799,254

'Suppliers' Confusion' Hits York Profits

YORK, Pa. — A net profit of \$337,537 after taxes for the last quarter of 1945 as compared with \$422,529 for the same period in 1944 has been reported by York Corp.

In a quarterly report to his stockholders, S. E. Lauer, president of the corporation, listed production and administration adjustments, removal of the priority rationing system, the current series of strikes throughout industry, and a "general confusion on the part of our suppliers" as the major factors contributing to the drop in net profits.

"Operations during this quarter, which immediately followed the war's end," he stated, "proved more difficult than in any similar period during the war. The cumulative effect was unbalanced production and a decided slowing down of shipments with its adverse effect upon sales and profits."

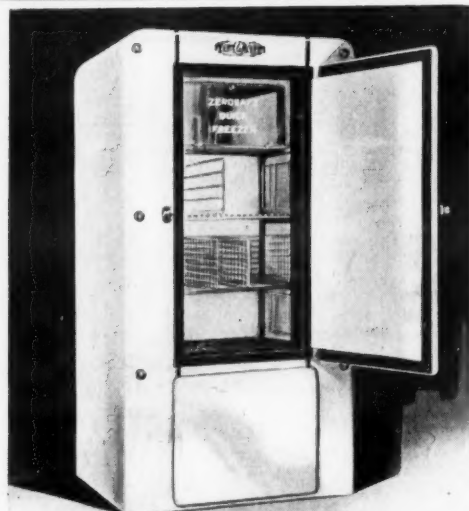
He pointed out, however, that any listing of total sales for the period does not reflect current trends of new business, "which continues to look favorable." With the return of more normal conditions, Mr. Lauer feels that prospects for the future will be more encouraging.

Citing wage and salary issues settled during the period, Mr. Lauer stated that wages were increased on the average slightly less than 11%, and salaries under \$5,000 a flat 10%. Other costs, however, were relatively stable. "Except for the salary increase, our expenses for sales, engineering, and administrative functions have held steady during the quarter, notwithstanding the upsurge in new business activity and postwar problems."

York's total sales for the 1945 quarter period were \$8,035,950 as compared with \$12,118,858 for the last three months of 1944. A total of \$717,752 was listed as the 1945 net profits before deduction of Federal income and excess profits taxes. In the same quarter of 1944 the corporation netted \$1,763,029 before deductions.

In the 1945 quarter \$380,215 was set aside for estimated taxes. In 1944, however, York reserved \$1,280,500 for expected taxes and \$60,000 as provision for war and postwar contingencies.

A total of \$9,469,963 in orders was booked in the last quarter of 1945 as compared with \$5,251,077 in the 1944 quarter. Uncompleted orders not included in sales for the 1945 period reached \$17,103,134. In 1944 the comparable figure was \$20,012,307, the report said.



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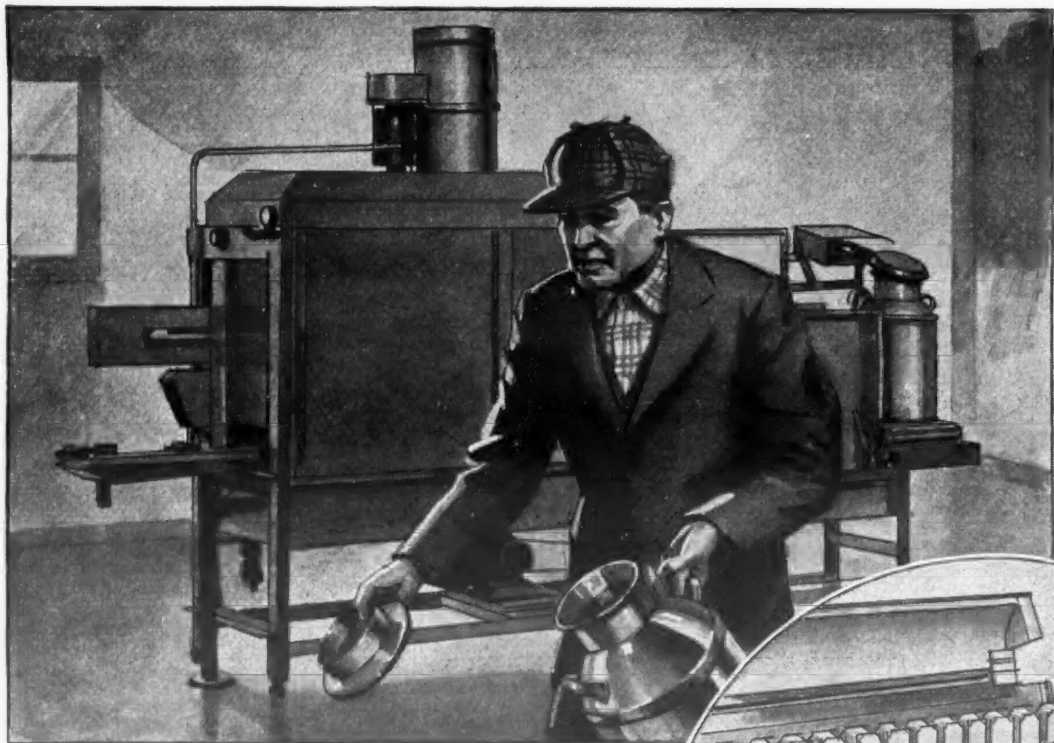
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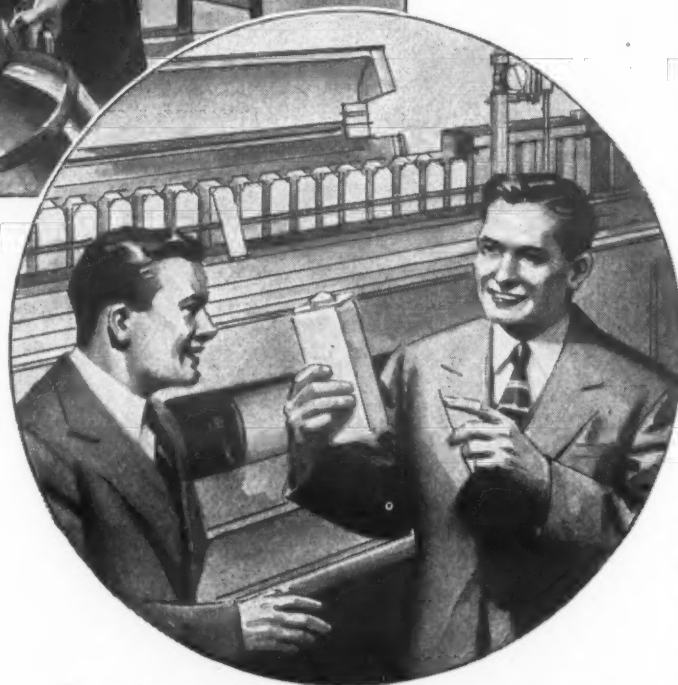
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Air Impellers for Every Purpose

Simplified Control Noted In Refrigeration Systems For German Army and U-Boats

WASHINGTON, D. C.—A reverse-cycle refrigeration system for submarines, a small field-operations refrigerator unusually simple in operation, and the development of a "headpiece" air conditioning system for use in tanks, were the principal German advances in the refrigeration field during the war.

Information on these and other German refrigeration developments is presented in Report No. 205, "German Refrigeration Industry," prepared by E. T. Simonson of the U. S. Engineers and available from the office of the Publication Board, U. S. Department of Commerce, Washington, D. C., at a cost of 50 cents a copy.

Details of some of the more interesting phases of the developments are omitted in Report No. 205, however, but reference is made that full description and drawings are "on file at MIRS in London." Just what the MIRS is was not explained, but undoubtedly the U. S. Department of Commerce might shed some light on the subject, if so requested.

MAIN FEATURES

The main features of German U-boat refrigeration equipment were:

(a) No by-passes were used around the automatic expansion valves.
(b) The coils were constructed of steel, as were the condensers. Both air cooling coils and condensers were zinc plated, externally on the coils, and overall on the condensers. Remarkable performance records were said to have been obtained on this type construction for condensing purposes.

(c) A panel board was assembled with simple hand-operated valves for reversing the cycle of operations. Elaborate controls were not used.

In these installations the systems provided reverse cycle heating and provisions were also made for the making of fresh water by collecting the condensate from the cooling

coils. It was reported that these U-boats could leave Germany, go to Japan, and operate there for a period of two months, then return to Germany without taking on any fresh water for the crew.

Complete plans and specifications for the operation of U-boat Type 21 refrigeration equipment were obtained and are available from MIRS as document CIOS/MIRS/104.

A special type of small portable refrigerator, with a capacity of 18 cu. ft., was moved with the troops. Complete detailed drawings are available from MIRS as document CIDS/MIRS/106. However, one feature not detailed on the drawings was that the compressor can be driven by almost any kind of a prime mover that might be available.

At the beginning of the war, only electric motor drives were employed, the motors being connected to diesel electric generator sets which were made into mobile units to furnish a ready source of power. As the war progressed it became necessary for them to employ almost every kind of prime mover available.

FIELD REFRIGERATOR SIMPLE

A feature of this portable field refrigerator, says the report, was its simplicity. It was protected by a high and low pressure cut-out, and the only other piece of electrical control equipment was a simple thermostat which broke the holding coil circuit of a manual push button starter, this only when an electric drive was used.

When some other method of driving the compressor was used, such as an internal combustion engine, the equipment was stopped and the temperature was regulated by an operator who checked the temperature of the box by means of a simple thermometer.

The Germans spent two years of research on tank air conditioning, building a chamber to simulate desert

conditions similar to those in North Africa.

From their research they concluded that it was necessary to provide air conditioning for the radio operator and driver only. They further believed that the best method of doing this was to cool the heads only of these men.

This research on tank air conditioning has been done in conjunction with the Medical Society of Germany, and temperatures of the subjects used in some of the research had been taken at as many as 45 different body points before it was finally determined that the critical point was the veins located in the temples of the head.

COOLING SYSTEM LATE

It was thus determined that if the heads of the men were cooled, they could stand body temperatures which would result in tanks under desert conditions. The Germans did not find this out until after the campaign in North Africa was over, and hence the idea was never used.

A copy of the basic German research upon this subject, obtained from the University of Heidelberg, is on file with MIRS as document CIOS/MIRS/107.

The investigation revealed that the Germans had constructed and put into operation low temperature test rooms for high altitude test opera-

tions. Three-stage ammonia systems used in such test installations were capable of producing temperatures as low as -96° F. In a cascade hook-up, in which ethylene was used, it was reported that temperatures as low as -169.6° F. were obtained.

The following other conclusions were drawn with respect to the activities of the German refrigeration industry during the war:

The German refrigeration industry did not make any new advances in design technique of compressors during the war.

No new refrigerant had been developed and used.

The German army was well fed at all times due to their highly developed system of cold storage plants. This system was based upon storage of food in large cold storage

warehouses in almost every large city in Germany in which plants were built in the years 1929 to 1936 and expanded from 1936 to 1945. In these large warehouses immense quantities of food were stored and transportation by rail and truck was available at each site.

In addition, each small town or village had its slaughterhouse where the local requirements were handled. Here also additional capacity was added in many places, especially along the east bank of the Rhine and in the central German sector. Thus Germany had an immense storehouse to fall back on.

The refrigeration capacity of Germany was completely engaged in the war effort, and although facilities were expanded many times, the industry was constantly behind in its deliveries of equipment.

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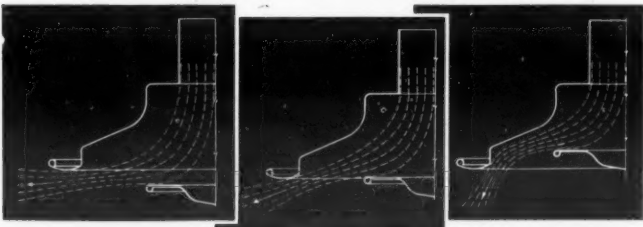
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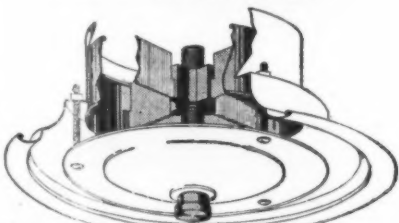
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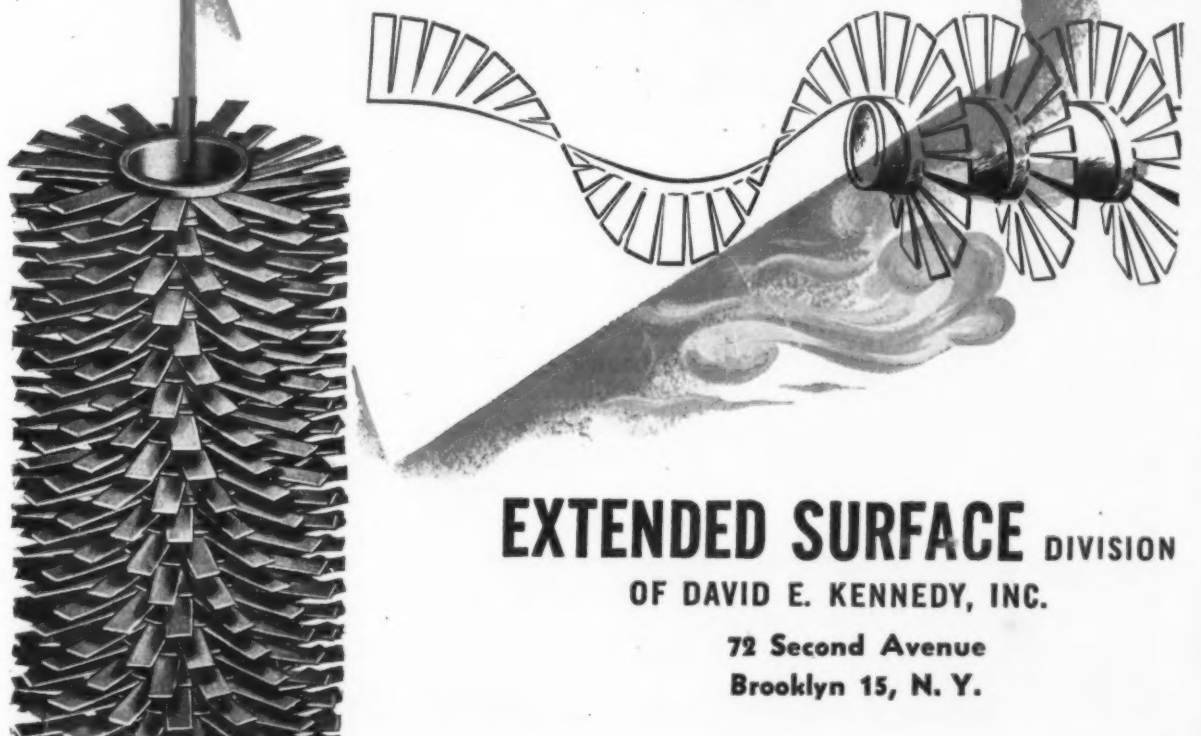
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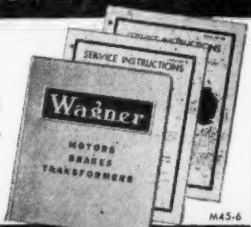
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Standby Units Considered
For Civic Auditorium

BUFFALO—The Auditorium Board of Buffalo hopes to provide auxiliary refrigerating machinery which would guarantee uninterrupted use of the Municipal Auditorium should a breakdown in present machinery occur.

This was revealed at a recent Common Council meeting when Joseph Davis, vice chairman of the board and a refrigeration engineer, explained a \$78,882 increase in the board's current budget.

New Railroad Cars to Have
Latest in Conditioning

BUFFALO—New railroad passenger cars will be equipped with air conditioning which will not only provide a maximum of comfort but also will eliminate all dust, germs, stale tobacco fumes, and other odors, George E. Bradfield, Jr., assistant vice president of the American Car & Foundry Co., asserted at a recent meeting of the Central Railway Club of Buffalo in Hotel Statler.

Sales Jump For West Coast Parts Wholesaler
With Installation of Self-Service System

This self-service arrangement instituted in its Los Angeles store by Refrigeration Supplies Distributor has proved a great advantage to both the wholesaler and refrigeration repairmen, declares Ira A. Hammer, assistant manager. Repairmen have been "more than satisfied by being able to see the merchandise; consequently, sales have jumped accordingly," he reports. Other parts and supplies wholesalers on the west coast have turned to self-service stores in the past year with similar results.

Back to Normalcy

Dealer Figures Trade-ins Will Become
A Problem Soon, So He's Preparing Now

PEORIA, Ill.—"We're going to have to accept trade-ins later on, so why not start right out with them now?" That's the way A. V. Cohen, head of Cohen Furniture Co. here, looks at the postwar appliance market, and the reason for opening a large appliance trade-in and reconditioning department simultaneously with a new appliance store.

"Dealers who think that they can get by permanently without accepting refrigerators and washing machines on new appliance sales are making a mistake," Mr. Cohen declared.

"Of course, there will be sufficient market for used appliances for awhile to allow customers to get rid of them themselves. But it won't be long before the housewife will be demanding some kind of allowance on her old refrigerator or washing machine before buying a new one. She won't be willing to advertise it herself or go to any trouble over the matter. Therefore the dealer already set up to recondition her appliance and resell it is most likely to get the business."

Cohen Furniture Co. has recently remodeled, taking over a next-door showroom for its appliance department which adds 26 x 172 ft. of space to the store. The new trade-in department is located at the rear of the new appliance store, well parti-

tioned off so that entering customers do not see a row of used refrigerators immediately. Space for 20 refrigerators and 30 washing machines is provided, with a separate sales desk.

In the basement directly beneath, Cohen's has set up a complete appliance reconditioning shop which will strip down every refrigerator and washing machine received, burn off the paint, and make all mechanical repairs from a large parts stock. Before reassembly, the appliances will be spray-enameled and the paint baked on in a gas oven for a brand-new finish. Mechanics on the payroll are all veterans.

"Assembly line reconditioning methods will help keep costs down," Mr. Cohen pointed out, "and allow us to charge a sufficiently good price for trade-ins to show a small profit on them. Meanwhile we'll be getting more new appliance sales with the trade-in problem already taken care of."

The store isn't going to advertise this service in any way, hoping that later OPA changes will make possible a larger spread between profit and trade-in allowances. In fact, the trade-in department won't be mentioned unless salesmen run up against customers who absolutely insist on trading in their old appliances.

Furniture Store Converts
Building to Exclusive
Retailing of Appliances

LEWISTON, Me.—The A. & R. Simpson Furniture Store here, instead of building a separate store for electrical appliances, such as many large stores have done, has moved out all its furniture and related lines from the original building—and will use this primarily as an electrical appliance store.

A new building elsewhere will accommodate furniture, bedding, and other household lines. The management is so well convinced that major appliances will be its chief interest for the next several years that it felt justified in turning the whole original store into appliance retailing!

Taylor Refrigeration Becomes
Taylor Distributing Co.

BILLINGS, Mont.—New name of the former Taylor Refrigeration & Appliance Co. is now Taylor Distributing Co., according to L. I. Taylor, manager. However, no change in ownership, management, or lines handled, is involved in the shift.

All the company's commercial retailing and construction has been turned over to the Christensen Plumbing & Heating Co. here.

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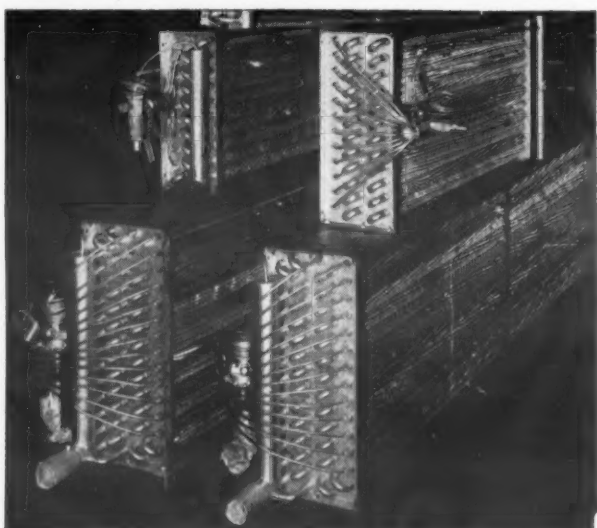
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The ICE-AIR CONDITIONING CO., INC. is equipped to make prompt deliveries on all types of Monsoon Coils, fabricated in any size or shape required.

A line of tested TYPHOON air conditioning equipment for smooth performance in all types of conditioning systems is now also available in limited quantities.

Monsoon Direct Expansion Coils and Coils for Water Cooling—Available in a wide range of sizes with circuits designed to provide for even distribution of liquid. Immediate delivery.



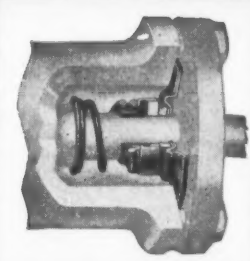
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Pemco Tells Program For Joint Meeting

(Concluded from Page 1, Column 5)

afternoon open for conference booth activity. The banquet and dance will be held Wednesday night, and all of Thursday will be given over to conferences.

Following is the complete program:

MONDAY, MARCH 4

- 9 a.m. Registration (Third Floor)
- 12:30 p.m. Rema Product Section Luncheon (West Ballroom)
- 2 p.m. Product Section meetings, open to Rema members only (In various of the private dining rooms)
- 7 p.m. Board of Directors Meeting (Private Dining Room No. 4)

TUESDAY, MARCH 5

- 9:30 a.m. Meeting called to order—F. J. Hood, president
Brief Report of Directors' Meeting—E. M. Flannery
Our President Reports—F. J. Hood
"Let's Have Better Engineered Management," Franklin Fowler, Wolf Management Engineering Co.
"Let's Have Proper Industrial Designing," Harold Van Doren, Van Doren, Nowland, and Schladermundt
"Let's Have Proper Industrial Relations," Leon Lamfrom, Lamfrom, Tighe, Engelhard, and Peck
Open Forum
"The All-Industry Refrigeration and Air Conditioning Exposition," K. B. Thorndike.
Announcement of new Rema officers
- 2 p.m. to 10 p.m. Conference booths open.

WEDNESDAY, MARCH 6

- 10 a.m. Joint R.E.M.A.-R.E.W.A. meeting
"Manufacturers and wholesalers relations—results and suggestions for the future"
(a) Manufacturers' Relations—F. S. Langsenkamp
(b) Wholesalers' Relations—George R. Allen
"Public Relations—Its Place in Our Industry," T. R. Sills, Sills, Inc.
"Postwar Markets," George S. Jones, Jr., vice president, Servel, Inc.
- 2 p.m. to 5:30 p.m. Conference booth opens
- 7 p.m. Banquet, floor show, and dance—Grand Ballroom. Tickets, \$7 each

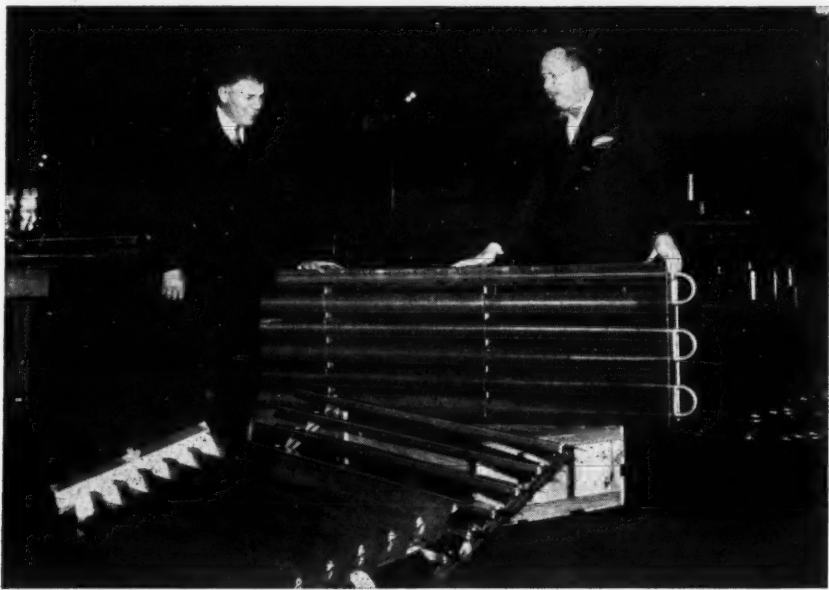
THURSDAY, MARCH 7

- 10 a.m. to 4 p.m. Conference booths open.



CORDLEY & H
452 FOURTH AVE., NEW YORK, N. Y.
Specialists in drinking water equipment for 50 years

Peerless In Production Following Move to Chicago



Following the recent move of all Peerless of America manufacturing facilities from Marion, Ind., to five plants in Chicago, M. W. Knight (right), general sales manager, and W. A. Honeychurch, assistant general sales manager, inspect a "flash" cooler just off the line. To move machinery, materials, etc., to Chicago 128 trucks were required.

ASME Group to Hear Papers on Conditioning

NEW YORK CITY — Various aspects of air conditioning and air sterilization will be discussed by speakers at a meeting of a group from the American Society of Mechanical Engineers here Wednesday, Feb. 27, in the main auditorium of the Engineering Societies' building, according to Alexander Zeitlin, program committee member.

The engineers, who are members of the Heat Transfer Division of the Metropolitan Section of the A.S.M.E., are scheduled to hear talks by J. W. Spiselman and F. M. Weaver, both consulting engineers.

Mr. Spiselman will address the group on "Heat Transfer in Modern Chemical Dehumidification." Mr. Zeitlin declared. A talk on "Physical and Germicidal Properties of Triethylene Glycol as Used in Air Conditioning and Air Sterilization" will be delivered by Mr. Weaver, the announcement said.

Dr. Harvey N. Davis, president of the Stevens Institute of Technology, is honorary chairman for the meeting. The program will begin at 7:30 p.m.

Potters & Brumfield Sales Opens New Chicago Office

CHICAGO — Potter & Brumfield Sales Co. announces the opening of a new office here, under the direction of Ralph T. Brengle, president. The company has been incorporated in the state of Illinois to handle all domestic and export sales of the Potter & Brumfield Mfg. Co., located at Princeton, Ind.

A veteran of two wars, Mr. Brengle was recently released as a commander in the United States Navy. Entering service in 1942, he was in charge of all electronic procurement for the Navy, Coast Guard, and Marine Corps in the Bureau of Ships. During the latter part of his service, he was electronics officer on the staff of Admiral Hewitt, commander of the Eighth Fleet in the Mediterranean. He was a member of the navy during World War I, serving in submarines and mine sweepers.

Prior to World War II, Mr. Brengle was a representative for Potter & Brumfield in the Chicago area, and has had a great deal of experience in the designing, production, and sale of relays, timers, and other electronic products.

Mathieson Alkali Names Logan Asst. Sales Head

NEW YORK CITY—John O. Logan has been appointed an assistant general manager of sales of The Mathieson Alkali Works, it is announced by G. W. Dolan, president.

Mr. Dolan also announces that Harry P. Smith has been appointed New York district sales manager, a post formerly held by J. B. Peake, who continues as an assistant general manager of sales.

FROZ-N-FOOD LOCKERS

INCREASE PROFITS with this LOCKER LINE

For more profits, sell A-S-E Froz-n-Food Lockers. Note these features:

- Glide-easy drawer action
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Change In L-63 to Limit Inventories of Parts Wholesalers Above \$35,000 Bracket

WASHINGTON, D. C.—In a recent amendment to Limitation Order L-63, wholesalers of refrigeration supplies whose total inventories at cost exceed \$35,000 can carry no more than their preceding three-month inventory, unless they are located in 17 western states, where a four-month inventory is permitted, the Civilian Production Administration has announced.

The \$35,000 bracket affects newly established parts wholesalers, also, for the new ruling requires that they must first obtain permission from CPA before they start operating if their inventory will exceed \$35,000.

Parts wholesalers who may use the four-month limitation must be located in the following states: Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming, N. Dakota, S. Dakota, Nebraska, Kansas, Oklahoma, and Texas.

There are three exceptions permitted to the inventory limitations under the revised order.

(1) A supplier is permitted to exceed his total allowable inventory when he purchases seasonal lines, provided the amount purchased is equal to that purchased during the peak of a comparable period in the preceding year with the peak period not to exceed 120 days.

(2) Maximum inventories may be Co. of San Antonio, Tex.

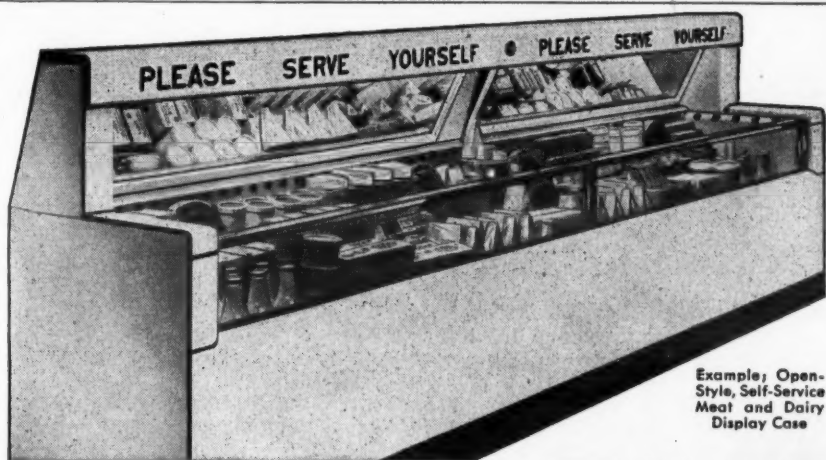
exceeded if the minimum order of supplies commercially available will bring the wholesaler's total inventory above his maximum, provided his total inventory was below maximum at the time the order was placed.

(3) A supplier is also allowed to exceed his maximum inventory if he runs short on a specific item or items. He may increase his inventory of the short items (owned or consigned to him) equal to the sales of such items he shipped during the preceding month, even though his total inventory may then exceed the allowable maximum.

Specified suppliers or classes of suppliers may be exempted from time to time, it was indicated by CPA. Applications for such exemptions should be made to CPA by letter.

Gladden, Giraud Join Pemco Customer Service Staff

BALTIMORE—Two additions to the customer service staff of Pemco Corp. have recently been announced by corporations officials. They are: William Gladden, who has served with Pemco Corp. for approximately 23 years, and Harold Giraud, former member of the Ed. Friedrich Mfg.



Example: Open-Style, Self-Service Meat and Dairy Display Case

UP-TO-THE-MINUTE—that's the word for Tyler. For Tyler is leading the trend to self-service refrigerators for food stores. TYLER FIXTURE CORP., NILES, MICHIGAN.

TYLER

The Ansul Research Staff
REPORTS ON

WAX

CAUSES FROZEN VALVES too!

These photographs show the results of practical machine tests in which 10% oil was circulated with the refrigerant. Valve temperature was approximately -25 degrees Fahrenheit. Every effort was made to exclude moisture. Within a few hours wax separated throughout the body of the expansion valve and the forepart of the expansion coil adhering firmly to the metal.

* Ansul jobbers are ready and equipped to render an intelligent, co-operative service to refrigeration engineers and maintenance men on problems which arise from time-to-time in the operation of refrigerating systems.

FOR EXAMPLE:

Samples of ice machine oils submitted by users of Ansul Refrigerants to Ansul Laboratories, are tested by Ansul laboratories without charge by the Ansul Standard Wax-Oil Separation Method. This approved method, developed and standardized especially for use in connection with oils used in refrigerating systems, provides an accurate determination of the amount of wax which separates from an oil at low temperatures.



*REG. U.S. PAT. OFF.

A wax deposit, about 1/8 inch thick, formed on the plate carrying the ball-valve enclosure and almost completely clogged the outlet of the expansion valve.

REMEDIES

To eliminate wax trouble in expansion valves and coils:

1. Use an oil which separates little or no wax from its mixture with the refrigerant at the operating temperature of the valve.
2. Install an oil trap to cut down the amount of oil (and consequent wax) circulating with the refrigerant.

SEND FOR THIS BULLETIN

An informative reprint, "THE SEPARATION OF WAX FROM OIL-REFRIGERANT MIXTURES," will be sent on request. No obligation. Just address...



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MARINETTE, WISCONSIN

DISTRIBUTORS FOR KINETIC'S "FREON-11," "FREON-12," "FREON-21," "FREON-22" AND "FREON-113"

What's New

Gemco Conditioner Has 2-Stage Compressor

ST. LOUIS—Powered by a "totally enclosed" 4-cylinder compressor which can operate at half or full capacity, a line of 3-ton and 5-ton package air conditioners has been introduced by General Engineering & Mfg. Co. here under the trade name "Gemco."

The compressor is so designed that only two cylinders will pump when cooling requirements are low, but as more cooling is required the thermo-

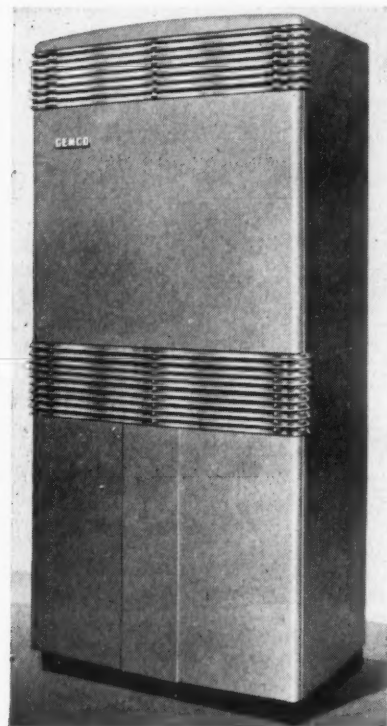
stat cuts in the remaining two cylinders, according to E. Gyax, chief engineer. Ordinarily, the compressor starts at half capacity and steps up to full load after about one minute, he said.

Blower on the 5-ton unit delivers 2,200 c.f.m. while the 3-ton unit delivers 1,500 c.f.m.

The cabinet is fitted with bright finish grilles. The outlet grille is equipped with directional vanes and can be adjusted to different outlet velocities for short or long room coverages, the company claims. Top section of the cabinet can be removed for duct connections.

Design of the conditioner permits optional installation of heating coils, using either hot water or low pressure steam.

Modernistic cabinet is 23½ in. by 39½ in. by 85½ in. high. Weight of the 5-ton conditioner is 850 lbs.; the 3-ton, 772 pounds.



Varied Control Features New Bendix Dryer

SOUTH BEND, Ind.—Thermostatic heat control, in the new Bendix home dryer will enable housewives to obtain washings damp dry, or even bone dry, merely by pushing a button, declares L. F. Worth, manager of dryer sales, Bendix Home Appliances, Inc.

In detailing specifications of the unit, he pointed out that it will be marketed next summer.

Using the new home dryer, moisture can be completely removed from 18 lbs. of wet clothes in 45 minutes, rendering them bone dry, or the thermostat can be regulated to obtain damp dry wash, the company claims. Even the degree of damp dryness can be controlled, Mr. Worth pointed out.

In addition to temperature control, and fast drying, the company claims the home dryer will have less wear on clothes due to a smooth drum, will be capable of larger loads, and will have exhaust regulation.

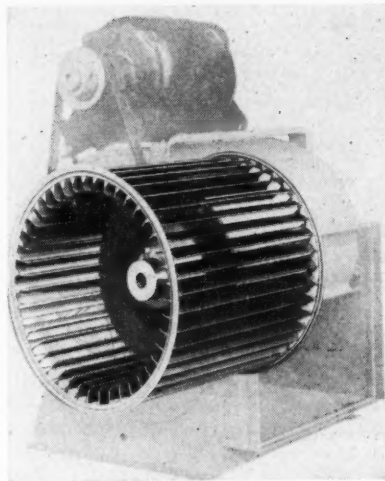
Two models, identical in appearance, are scheduled for production, Mr. Worth continued. One will be gas-heated and the other electrically heated. Company specifications for both models are: Capacity: 18 lbs. wet clothes; operating speed: 50 r.p.m.; motor: ¼ hp., 110 volts, a.c.; dimensions: 36 in. high, 31 in. wide, 25 in. deep; weight: 250 lbs.; finish: white, hard-baked enamel.

Operating on 220 volts (current available in homes wired for electric ranges), the home dryer is rated at 20 amperes, 4,800 watts. Venting of moisture, according to Mr. Worth, will not be necessary unless there is more than one dryer in the room. Cost of operation is estimated at three to six cents per load.

The gas heater, which draws 22,000 B.t.u. of gas, has room at the back for a 3 in. pipe connection to exhaust gas fumes outdoors where necessary, the company said. The

center of this hole is located 33¼ in. from the bottom and 3½ in. from the right side. Operation estimates place cost per load between one and two cents.

Lau Blower Wheel Uses Center Suspension



DAYTON, Ohio—Featuring center suspension which is claimed to provide greater mechanical strength, true concentricity and balance, a new "Series A" blower wheel has been introduced by Lau Blower Co. here.

Deep blades of the blower are mechanically locked to the center disc, permitting the use of narrow end rings, which, the company says, allow greater airflow into the wheel. End rings are assembled and locked to the blades in a spinning operation claimed to achieve truer concentricity.

Although designed specifically for the Lau "Series A" blower, the wheel itself can be purchased separately, the company announces.

Thread & Gasket Sealer Introduced by Parker

CLEVELAND—Uniseal, a general-purpose thread and gasket sealing compound that is described as resistant to air, water, steam, gas, gasoline, oil, hydraulic fluids, and aromatics, but soluble in alcohol and carbon tetrachloride, has been announced by the Parker Appliance Co. here.

Being a paste of uniform consistency containing no free metallic particles which might set up corrosion due to galvanic action, Uniseal is said to flow smoothly to form ribbon gaskets. It blends readily with cut gasket material, the company claims.

Uniseal is reported to possess good anti-seize characteristics, which, the Parker company claims, aid in the assembly of threaded fittings. Solubility in alcohol and carbon tetrachloride simplifies any cleanup that might be necessary.

Upon completion of various tests, Parker officials report 100% effectiveness under severe conditions of vibration and at temperatures above 300° F. Uniseal will be available in tubes and containers ranging from 8 oz. to 5 gals.

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$2.50 per insertion. Limit 50 words. RATES for all other classifications \$5.00 per insertion. Limit 50 words. Advertisements set in usual classified style. Box addresses count as five words, other addresses by actual word count. PAYMENT in advance is required for advertising in this column.

POSITIONS WANTED

MAN: 42 years old, 18 years in refrigeration and air conditioning industry. Competent engineer, held executive and promotional positions with major manufacturers and distributors, both foreign and domestic territories. Desires position managing commercial refrigeration and air conditioning operation. Minimum consideration to start, \$6,000. Available March 31st. Box 1927, Air Conditioning & Refrigeration News.

YOUR MAN FRIDAY available. Broad experience in sales and the practical application of commercial equipment. Familiar with office routine, buying, stock control. Prefer to associate with small, growing organization where a conscientious effort will be appreciated. Member A.S.R.E. Good personality. Married, age 45. Box 1934, Air Conditioning & Refrigeration News.

ELECTRIC APPLIANCE Repairman: Thoroughly experienced in all kinds of electrical appliances, including commercial and domestic refrigeration, electric ranges, water heaters, etc. Desires connection Chicago or southern states as service manager. Also experienced in appliance sales. Box 1936, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

FACTORY REPRESENTATIVES to contact jobbers and distributors by producers of the ZERO-O-LINE of Frozen Food packaging in Michigan, Ohio, Kentucky, Southern Indiana, North and South Dakota, Nebraska, Missouri, Kansas, Oklahoma, Texas, Arkansas, New Mexico. YORKVILLE PAPER CO., INC., 431 East 77th St., New York 21, N. Y.

FACTORY MANAGER: Large manufacturer in small Northern Indiana city has opening for factory manager. Must have proven production record with experience in manufacture of sheet metal appliances or products. Experience with porcelain plant desirable and good personnel record necessary. Opportunity to advance with a growing business. Box 1933, Air Conditioning & Refrigeration News.

ESTABLISHED MIDWEST manufacturer looking for superintendent or factory manager familiar with domestic and commercial refrigeration; also steel cabinet construction and production. Prefer man 30 to 40 years of age with good educational background. Box 1939, Air Conditioning & Refrigeration News.

FRANCHISES WANTED

MANUFACTURER'S REPRESENTATIVE contacting jobbers, chain, and department stores in Wisconsin, Minnesota, North and South Dakota desires electrical lines such as fans, small radios, appliances, etc. TOM DWYER & CO., 301 Commerce Bldg., St. Paul 1, Minn.

ROOM COOLER Distributorship wanted in northern New Jersey. Established refrigeration and air conditioning concern with complete sales, installation, and service set-up wants well engineered and attractive line. Box 1937, Air Conditioning & Refrigeration News.

FRANCHISE WANTED for case, cooler, freezer distribution in northern New Jersey. Old established firm with complete sales and service departments. Wants immediate connection. Box 1938, Air Conditioning & Refrigeration News.

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DEHUMIDIFIER, LECTRODRYER Air Conditioner, type CHG, equipped with gas heater, good condition. AAC CO., 241 E. 51st St., New York, N. Y.

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BEVERAGE COOLERS: 6 ft. capacity 22 cases; 8 ft. capacity 30 cases. These are dry coolers with heavy duty coils and one forced-air fan in 6 ft. model, two in 8 ft. model. Both have stainless steel doors and trim. Immediate delivery. GENERAL REFRIGERATORS CORP., 678 Broadway, New York 12, N. Y., STUYVESANT 9-1222.

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ROUND BUTCHER Blocks. Immediate shipment. 20 inches to 48 inches. Approximately \$1 per inch less 50% to distributors. One-half cash with order. THOMPSON-EVANS MFG. CO., 204 Pyramid Bldg., Little Rock, Ark.

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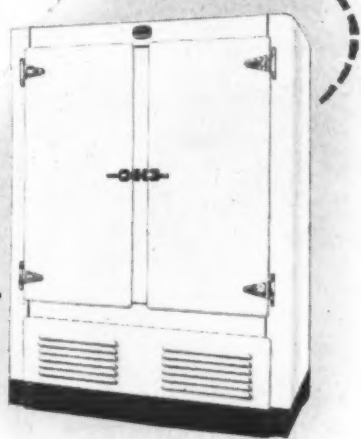
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Air Transport of Perishables Offers 'Pioneer' Field For Refrigeration

Cooling By 'Altitude' Hasn't Been Satisfactory

By C. Dale Mericle

DETROIT—Continued development of air transport of perishable foods offers broad opportunities for the refrigeration field, not only from the standpoint of developing refrigeration systems for transport planes, but also in providing equipment all along the way from the farm to the table.

This belief was expressed by Dr. Spencer A. Larsen, who as director of air cargo research for Wayne university here, has been conducting extensive studies into the subject under a program supported by United Airlines, Pan American Airways, Goodyear, A & P Tea Co., and the United States Fish and Wildlife service.

Discussing "Temperature Control of Airborne Perishables," Dr. Larsen traced the development of this new field and discussed problems involved for the Detroit Section of American Society of Refrigerating Engineers at its February meeting.

Industry Not Keeping Up?

He challenged the engineers with the statement: "I have a feeling that the refrigeration industry is not keeping up with the aviation industries."

This was in reference to his statement that no suitable refrigeration has as yet been developed for airplanes which would permit proper cooling of perishables in transit.

"During wartime the airplane demonstrated its capacity to carry goods as well as personnel and now there are some 75 planes in the country carrying all types of air cargo," said Dr. Larsen.

"Many of these cargo transports are operated by private contractors, with various types of planes in use such as the DC-3, C-46, and the Fairchild Packet. The Packet is frequently described as a boxcar with wings," declared Dr. Larsen.

For the most part airlines have carried most of the freight, although the number of private contractors is increasing, he said.

The volume is not great as yet, and most of the shipments consist of dry freight, but there is a large group of perishables such as fresh fruits and vegetables, some flowers, and drugs which should lend themselves to air transport, believes Dr. Larsen.

"This perishable cargo is likely to account for 60% to 70% of the total airborne cargo in the future," he predicted.

One of the chief problems involved in airshipments, of course, is the cost, which does run much higher than rail or truck transportation, pointed out Dr. Larsen. The rates have come down considerably over the past few years, however, he emphasized.

Previously the air express rate was about 80 cents a ton-mile, just 40 times the railroad freight rate. Now the air express rate is down to 60 cents a ton-mile, he said.

"American Airlines formerly offered a freight rate of 26 cents per ton-

mile, but this has been reduced to 20 cents, 16 cents, and as low as 13 cents and 12 cents on some contracts.

"United Airlines now offers a rate of 15 cents a ton-mile on perishables, which is coming pretty close to the Railway Express rate of 12 cents a ton-mile on perishables," said Dr. Larsen.

These rate reductions, pointed out Dr. Larsen, have occurred before the airlines have acquired regular cargo planes. It is important to note, he added, that airlines are adding more men to their air cargo staffs in anticipation of much more traffic in this category.

The Problem of Rates

"While air cargo rates are likely to become lower in the future, I doubt that they will go below eight to 10 cents a ton-mile within the next five to 10 years," he predicted.

Despite the lowering of air rates, they are still higher than other forms of transportation—which brings up the obvious question: what specific advantages does air transportation offer to make it worthwhile for shippers?

For dry freight the chief advantage is speed of shipment, which can be especially important in emergencies, explained Dr. Larsen.

With perishables, air transport can (1) greatly improve the quality of the food, permitting higher selling prices, and (2) reduce the amount of spoilage in transit, he believes.

Ordinarily fruits and vegetables are harvested long before they become ripe and are permitted to ripen during the several days they are in transit via rail or truck. Although produce thus ripened may have a fairly good appearance it is definitely lacking in flavor and nutritive qualities, as compared with tree or vine-ripened produce, said Dr. Larsen.

Tomatoes, for example, have double the vitamin content when allowed to ripen on the vine for overnight shipment to markets by airplane, and peaches possess twice their normal sugar content when tree-ripened in contrast with their state when picked early for shipment by slow, conventional methods, he declared.

Air Transport's Advantages

Dr. Larsen pointed out that while his research is basically concerned with the social benefits to be derived by the consumption of foods that have more nutritive value, the public has shown great interest and liking for ripe foods shipped by air. At one food market in the east, he said, airborne vine-ripened tomatoes have outsold "train-ripened" tomatoes 20 to one despite being offered at a higher price.

The second advantage of air transport—reduction of spoilage—should interest both the public and the food industry, he believes.

All along the line the food industry is becoming more and more concerned with the problem of spoilage and the resultant waste. If this tremendous waste can be eliminated food prices might be lowered with more profits going to the food industry, hinted Dr. Larsen.

It is this reduction in spoilage plus the higher prices which airborne produce commands that makes this venture so attractive to food handlers, he said.

"Not all products benefit from overnight air transport," admitted Dr. Larsen. "We have found that grapes, for example, are about the same whether they are shipped by air or rail."

Turning to the problems that confront both the airlines and the food industry, Dr. Larsen cited these three as paramount: (1) the need for protective wraps for the produce, (2) the need for suitable methods of gathering freight locally, and (3) development of controls of temperature, humidity, and ventilation adopted for air shipments.

The second of the above problems may be solved by the method being instituted currently by United Airlines, he said. United is now estab-

lishing a pickup and delivery service which should take care of getting the produce to the plane and delivering it to the wholesaler or retailer, believes Dr. Larsen.

All three problems are closely linked, however. That of packaging produce for shipment depends largely on the adequacy of temperature and humidity controls both in transit and in production and merchandising.

SPEED ALONE NOT ENOUGH

"Airlines and private contractors have had difficulty in relying on the speed of air transport alone to maintain quality of food," he said. "A flight lasting 15 to 20 hours makes for rapid deterioration of food. Such shipments as corn from Florida and peas from Oregon, for example, have arrived overheated or frozen."

Studies made by Dr. Larsen and his staff have determined the ideal temperatures and humidities for a variety of items for shipment. Dr. Larsen gave the following:

	Temperature	Relative Humidity
Asparagus	32°	85-90%
Celery	31°-32°	90-95%
Corn	31°-32°	85-90%
Cucumbers	45°-50°	80-85%
Lettuce	32°	90-95%
Tomatoes (ripe)	40°-50°	95-90%
Tomatoes (mature green)	55°-70°	
Pears	28.5°-29°	
Cherries	31°-32°	

To solve the problems of temperature control some shippers in the west are pre-cooling fruits and vegetables before loading them on planes, said Dr. Larsen. It is also

advisable for farmers to harvest the produce during early morning hours before the produce became excessively heated, he suggested.

Tracing the experiments of air shippers, Dr. Larsen recounted how "at first the airlines merely tried to hurry the shipments. The next step was to pre-cool shipments, but for a time the airlines were not careful about refueling stops during hot weather. With stops for refueling at desert airports, the shipments heated up to 60°, 65°, or even 70° or more. Then the airlines watched refueling more closely, cutting down the number of stops and making them as quickly as possible."

The attempts to cool shipments by flying at high altitudes have not been wholly satisfactory, according to Dr. Larsen. Flights at 10,000-ft. altitudes may provide temperatures of 40° to 45°, but to achieve sufficiently low temperatures the planes must fly at 13,000 to 14,000 ft. This requires that the pilots have special provisions for oxygen, which, with the higher altitudes, adds to the cost of shipments.

INSULATED CARTONS USED

In the absence of refrigeration systems adapted for cooling a cargo plane, it has been necessary to employ insulated shipping cartons, said Dr. Larsen, who has experimented with a container that consists of an inner and outer carton insulated with a Thermo-craft lining approximately 1 in. thick which is placed between the inner and outer boxes. The inner carton is also lined with Pliofilm.

The Pliofilm lining, according to Dr. Larsen, is so designed as to admit

a minimum amount of oxygen and release CO₂ as given off by the produce.

With pre-cooled shipments this double carton permits a rise of ½° to 1° per hour, so that many types of produce will remain in good condition after a flight of 15 to 20 hours, he declared.

Such a carton should prove particularly useful in air shipments of fish, believes Dr. Larsen. The usual rail shipment of fish requires that they be packed in a container with ice. The wood container and ice have a combined weight as much as the fish, where as the carton developed by Dr. Larsen weighs only 10% of the fish it contains. This saving in weight should help overcome the higher cost.

Furthermore, said Dr. Larsen, the quality of the fish should be much improved. Fish experts say that ice crushes and mangles fish while water trickling through the fish takes out their flavor and quickly spreads infection should any develop, he reported.

Stressing the importance of developing better means of keeping food under ideal conditions of temperature and humidity on their way from the grower to the consumer, Dr. Larsen said that wholesalers especially are giving much more attention to this problem, with the probable result that more and better refrigeration equipment will be installed widely.

He pointed out that even airlines must prepare to provide refrigerated warehouse facilities at airports for storage of perishables from the time it is unloaded from the plane until it is hauled away by the wholesaler or retailer.

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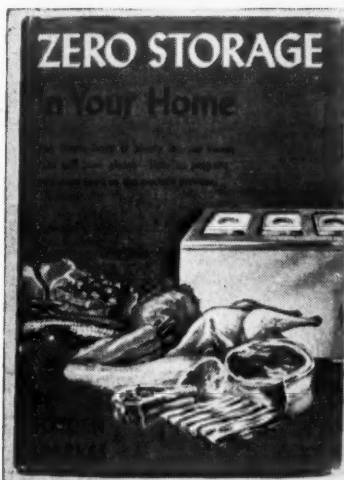


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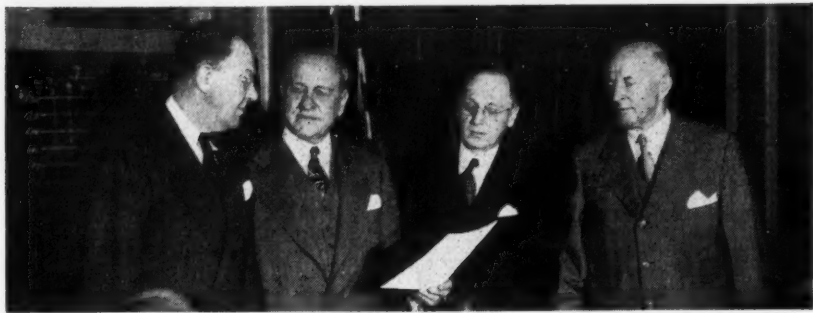
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Finance Company Heads Map Campaign Plans



Commercial Credit Co.'s top command briefed a countrywide representation of divisional and regional managers on plans for term financing of consumer goods, at a recent meeting in Baltimore. Left to right are H. B. Mathews, vice president; H. L. Wynegar, president; E. C. Wareheim, executive vice president; W. B. Wylie, vice president.

'Liberalize Instalment Terms' Says One Credit Authority; 'Keep Federal Rule' Asks Another

NEW YORK CITY—Should consumer credit control through the Federal Reserve Board's Regulation W be continued, dropped, or changed? The question has provoked some widely divergent opinions among retail credit men.

"It should be liberalized in four respects," believes Earl E. Paddon, president of the National Retail Credit Association, who addressed the third annual Northeastern and Mid-Atlantic Credit Conference here recently.

"We should ask," said Mr. Paddon, "that the duration of the contract be extended to 18 months on hard merchandise. We should ask that the down payment be reduced. We should urge extension of the freeze date to the last day of the second month. We should suggest that amounts of \$25 or less shall not be subjected to this freeze requirement."

Mr. Paddon, who is credit manager of the Lambert Furniture Co., St. Louis, advocates the establishment in each Federal Reserve district city of a committee of credit men to represent the national organization, and to negotiate with the Reserve Bank officers changes in Regulation W that would be of interest to district members.

The opposing viewpoint was presented by Louis J. Breuner, chairman of the John Breuner Co., in an address at a U. S. Chamber of Commerce marketing conference in Sacramento, Calif. He advocated permanent federal regulation of consumer credit as a means of preventing a resumption of the sale of such products as electric refrigerators on a "nothing down with five years to pay" basis.

"The Federal Reserve system has

done a good job in administering Regulation W to date, and they have a complete knowledge of the problem, asserted Mr. Breuner. "A law should be passed in our Congress making the regulation of credit a permanent function of our Federal Reserve System."

Comparing the need of regulation in the instalment field to government regulation of railroads, banks, the maritime industry, and similar regulatory provisions in industry, Mr. Breuner contended that instalment credit is too diversified and important to the national economy to be regulated by "private initiative."

"There was a time," he said, "when most commodities sold on an instalment basis were handled entirely by the retailer who sold the merchandise and who financed his own contracts. Through trade associations, educational programs, and community credit policies, some reason prevailed in the length of time of contracts and the amount of down payments."

"However, by the time 1941 rolled around, the instalment business had many ramifications. There were not only retailers in the field, but the business had grown to where personal loan companies and manufacturers' loan subsidiaries had entered the field—each vying with the other for a share of this business."

"There was no way to bring all these divergent interests together to create a common understanding or to formulate policies which would insure proper controls, and one of the last terms, before the advent of Regulation W, which we remember very well, was 'nothing down with five years to pay' on electric refrigerators," concluded Mr. Breuner.

Richard A. Herrick, credit manager

of C. F. Hovey Co., of Boston, suggested a community controlled system for the establishment of sound credit policies, in his speech before the Northeastern and Mid-Atlantic Credit Conference.

"We are all in agreement," began Mr. Herrick, "that it is undesirable to return again to the practices of the past in competition in credit terms—that method of nothing down and the balance when you catch me, which only resulted in a situation of dog-eat-dog, to the benefit of no one and the detriment of all."

"So it becomes desirable, almost to the point of necessity, that we cooperate with each other in the proper control and extension of consumer credit. Through the intelligent use of community credit policies, we may well have the answer. A gentlemen's agreement entered into voluntarily by the merchants of a community with the objective of outlining sound credit practice for that community can and does properly control the extension of credit."

Although durable goods shortages are holding retail instalment selling to a low level, the latter part of this year will mark the beginning of expansion of instalment consumer credit "such as has never been seen before," it was declared by Albert S. Kleckner, credit manager of the Namm Store, Brooklyn, at the New York conference.

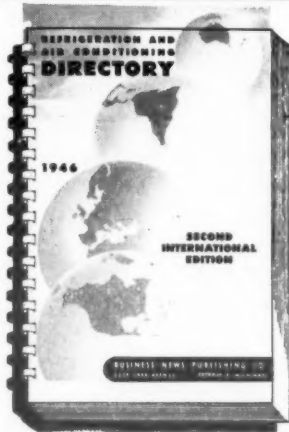
Memphis Retailers Form Organization

MEMPHIS, Tenn.—E. E. Willis of the Duffey Furniture Co. here has been elected president of the Memphis Retail Furniture Dealers' Association, which includes most of the city's major-scale appliance dealerships. He succeeds M. L. Hagedorn of Rhodes-Jenning Furniture Co., who was elected chairman of the board of directors.

Other new officers are: Howard Graham, first vice president; T. J. Beasley, second vice president; Gwin C. Scott, secretary-treasurer; and M. O. McCutcheon, secretary-manager.

Besides Mr. Hagedorn, the board of directors includes Jo J. Ivy, Charles Young, Sam Fortas, L. C. Cole, Roy Sanford, Charles Akers, Sr., Harry Fortas, and Lazar Kahn.

The group will standardize appliance retailing methods in the Memphis and West Arkansas district and will likewise supervise a training school being set up to train veterans as appliance service mechanics.



REFRIGERATION AND AIR CONDITIONING DIRECTORY

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